Ballot-Scanner Voting System Failures in the News — A Partial List

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www.votersunite.org/info/OpScansInTheNews.pdf

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Executive Summary

Direct Recording Electronic (DRE) voting machines have been widely discredited throughout the United States and abroad. As a result, many U.S. jurisdictions are turning to ballot scanners (often called "optical scanners") to tabulate votes marked on paper ballots. Florida and New Mexico have passed laws that ban the use of DREs, and other states are moving away from using DREs as well.

Data collected from over 1,000 news stories and voter hot line reports justifies this trend. The reports revealed over three times as many problems with DREs as with ballot scanners during the 2006 general election.[1] For each type of electronic machine, the following table shows the number of states that used the equipment in 2006, the number of problem reports, the number of states reporting problems, and the number of counties reporting problems.

Machine Type	# of States Where Used		Problems Reported		
	For Poll Sites	For Mail-in	# Reports	# States	# Counties
DREs	34	--	760	29	239
Ballot Scanners	38	50	209	24	79
Electronic Ballot Markers	29	--	57	14	22

While the trend toward ballot scanners has been motivated in large part by the unreliability of DREs and the inability to conduct meaningful audits of DRE results, there are risks associated with the use of ballot scanners also. It is not uncommon for scanner systems to malfunction during elections, causing confusion, counting delays, and even inaccurate results.

Despite historical evidence of scanner miscounts, results generated by ballot-scanner systems are rarely verified by a hand count unless the results appear implausible. Virtually all the miscounts described in this document (over 100) were detected by hand counting ballots when scanners produced implausible results. In some cases, erroneous results were certified because they appeared plausible and the error was discovered only after certification. Laws in some jurisdictions do not allow a timely and meaningful verification of the results. This means that inaccurate tallies may remain undetected, and outcomes that a hand count would have reversed may be certified.

The information in this document was compiled in order to inform election officials and the public of the types of malfunctions that occur in ballot-scanner voting systems. Armed with this knowledge, officials will be able to make more informed choices, as well as establish better procedures to prevent or mitigate the impact of scanner failures on elections held in their jurisdictions.

This document briefly describes 186 malfunctions of ballot-scanner systems reported in the news from 1998 through February of 2009 and tracked by VotersUnite.Org. The stories provide a representative sample of the types of malfunctions that occur, but they do not comprise a comprehensive report of voting system malfunctions, because:
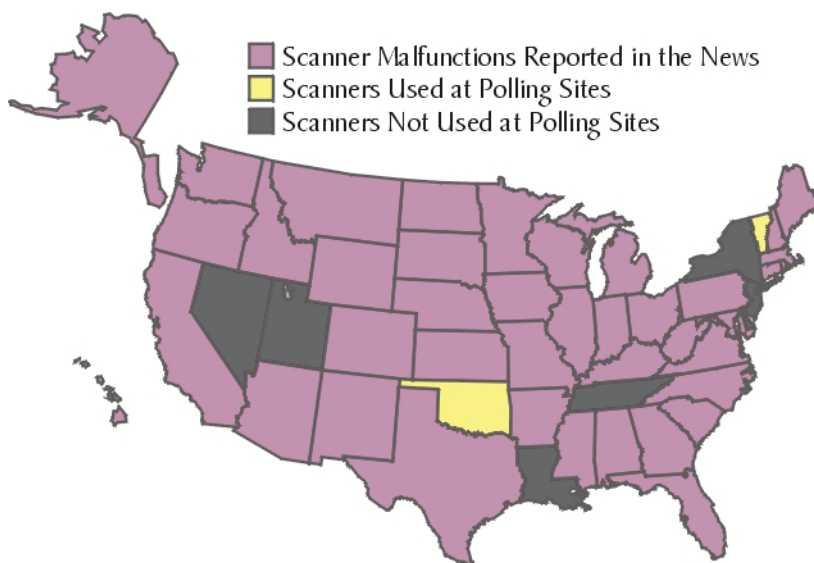
♦ We began tracking voting system malfunctions in 2003, so our data prior to that period is sparse.

♦ We know we did not encounter every news report of voting system malfunctions across the country.

♦ Reports gathered by election hotlines established in 2004, 2006, and 2008 reveal that the majority of malfunctions are not reported in the news.

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[1] **E-Voting Failures in the 2006 Mid-Term Election.** January 2007. VotersUnite.Org, VoteTrustUSA, Voter Action, Pollworkers for Democracy. http://www.votersunite.org/info/E-VotingIn2006Mid-Term.pdf

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The malfunctions described in this document occurred in Washington, D.C. and 161 different counties in 41 states.

This illustration shows the states in which these malfunctions occurred. Only two of the nine states for which we have no problem reports use ballot scanners at the polls; the other seven use DREs or lever machines.

Ballot-scanner system malfunctions described in the following sections are grouped into six categories:

♦ Incorrect Tallies

♦ EMS (Election Management System) Miscounts and Other Failures

♦ Memory Card Malfunctions

♦ Mark-Detection Failures

♦ Misprinted Ballots

♦ Miscellaneous Operational Malfunctions

News stories that identify several different types of malfunctions have been placed into the category that is of most concern. For example, in Jackson County, Oregon, the news report said that scanners miscounted, jammed, and failed to read blue ink. Since miscounting is the most egregious of those problems, this item was placed in the category "Incorrect Tallies."

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Incorrect Tallies

This section describes 80 instances in which optical scanners reported inaccurate results. In many cases, incorrect ballot programming or mishandling of straight-party votes was the cause. In some cases, the scanners simply failed to detect votes or inexplicably added votes, and officials did not know the cause of the miscount. Sometimes a hand count reversed the outcome.

Date	Equipment	Place/Description
November 1998	Diebold AccuVote OS	**Pima County, Arizona.** For the third time in as many elections, Pima County, Arizona, found errors in the tally. The computers recorded no votes for 24 precincts in the 1998 general election, but voter rolls showed thousands had voted at those polling places. Pima was using Global Election Systems machines, which now are sold under the Diebold company name. [2]
November 2000	Diebold AccuVote OS	**Bernalillo County, New Mexico.** Election officials in the state's most populous county found that a flaw in the ballot programming caused 67,000 absentee and early-voting ballots to be incorrectly counted following the Nov. 7 presidential election. [3] The tabulation system and software worked correctly, but a county technical employee failed to set up an element of the system properly, said Frank Kaplan, Global's Western regional manager. New Mexico's ballots are designed for voting by party, but voters can choose candidates from other parties. A programmer did not link the candidates' names to their respective parties. "The problem took 22 minutes for us to fix," he said. "It was just a matter of clicking on the correct link."
November 2000	ES&S Optech Eagle Precinct Scanner	**San Francisco, California.** 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. [4] 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.

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[2] **Computer fails to record 9,675 Pima County votes.** The Arizona Daily Star, 11 Nov. 1998. Referenced in *Black Box Voting*, by Bev Harris. Chapter 2. http://www.blackboxvoting.org/bbv_chapter-2.pdf

[3] **Human error is cause of N.M. election glitch.** Government Computer News; November 20, 2000; Vol. 19 No. 33, By Donna Young http://www.gcn.com/vol19_no33/news/3307-1.html

[4] **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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Date	Equipment	Place/Description
August 2002	ES&S Central Scanner	**Clay County, Kansas.** 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. In one ward, which Mayo carried 242-78, the computer had mistakenly reversed the totals. [5] This statement suggests that the computer in the "one ward" had the candidates mis-mapped to the table that holds the voting results.
September 2002	ES&S Optical Scanner	**Union County, Florida.** Straight party votes were miscounted.[6] 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&S, accepted responsibility for the programming error and paid for a hand recount.
November 2002	ES&S Optical Scanner	**Adams County, Nebraska.** 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 **programming adjustments.** [7]
November 2002	ES&S Optech 3P Eagle	**Chatham County, North Carolina.** A ballot programming error caused Republican votes to go to the Libertarian candidate. [8] ... 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.
November 2002	Diebold AccuVote OS	**Robeson County, North Carolina.**[9] Ballot tabulating machines failed to work properly in 31 of 41 precincts. Local election officials said the problem was the result of a software glitch, and ballots had to be recounted. In a January 2004 interview with Dinah in the office of the Robeson County Director of Elections, she said that there had been a problem in the programming of the memory cards and all the ballots had been recounted by hand.

[5] **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

[6] **Black Box Voting** by Bev Harris, Chapter 2. http://www.blackboxvoting.org/bbv_chapter-2.pdf

[7] 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.

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

[9] **Voter turnout surprises officials.** Sun News. September 12, 2002. http://www.myrtlebeachonline.com/mld/sunnews/news/local/4056664.htm

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Date	Equipment	Place/Description
November 2002	ES&S Optical Scanner	**Sarpy County, Nebraska.** 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. [10]
November 2002	ES&S Optech 4C	**South Dakota.** 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. [11]
November 2002	Sequoia Optech Scanner	**Taos County, New Mexico.** A ballot programming error caused the Sequoia Optech optical scanner to assign votes to the wrong candidates. Just 25 votes separated the candidates in one race; another race had a 79-vote margin. After noticing that the computer was counting votes under the wrong names, Taos County Clerk Jeannette Rael contacted the programmer of the optical machine and was told it was a programming error. [12]
November 2002	ES&S Optech 3P Eagle	**Wayne County, North Carolina.** 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. [13]

[10] **Omaha World-Herald,** 6 November 2002; "A late night in Sarpy; glitches delay results". Referenced in *Black Box Voting*, by Bev Harris. Chapter 2.
http://www.blackboxvoting.org/bbv_chapter-2.pdf

[11] **NPR: Morning Edition,** 6 November 2002; "Analysis: Senate races in Minnesota and South Dakota" Referenced in *Black Box Voting* by Bev Harris, Chapter 2.

[12] 06/03/04. Conversation with a woman at the Elections Division of New Mexico. She told me Taos used the Sequoia Optech and confirmed that it was a programming error by the local programmer. New Mexico does not have their ballot programming done by the vendor. Original reference from *Black Box Voting,* Chapter 2. Albuquerque Journal, 7 November 2002; "Taos To Recount Absentee Ballots"

[13] "**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

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Date	Equipment	Place/Description
April 2003	ES&S M100 Precinct Scanner	**Lake County, Illinois. [14]** 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.
October 2003	Diebold AccuVote OS	**Alameda County, California.** Tally software suddenly began to malfunction during processing and began giving one candidate's votes to a different candidate in the recall election. Poll workers in Alameda County noticed something strange on election night in October. As a computer counted absentee ballots in the recall race, workers were stunned to see a big surge in support for a fringe candidate named John Burton. Concerned that their new $12.7 million Diebold electronic voting system had developed a glitch, election officials turned to a company representative who happened to be on hand. Lucky he was there. For an unknown reason, the computerized tally program had begun to award votes for Lt. Gov. Cruz Bustamante to Burton, a socialist from Southern California. ...Alameda County officials still don't know why the computer program failed on election night. In fact, they only discovered the malfunction because they could compare the paper absentee ballots the software was counting to the computer's tally.[15]

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[14] **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

[15] **Electronic voting's hidden perils.** Mercury News. February 1, 2004. By Elise Ackerman. http://www.mercurynews.com/mld/mercurynews/news/special_packages/election2004/7849090.htm

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Date	Equipment	Place/Description
March 2004	Diebold AccuVote OS	**Alameda County, California.** A bug in the software caused the machines to count absentee ballots inaccurately. The County must use a workaround. The problem resided with the (unique) internal precinct ID numbers exceeding the largest number that is possible to print on the optical scan ballot. … The high number of the database imports inadvertently caused the precinct ID number to exceed the largest number that it is possible to print correctly on the optical scan ballot. … For future elections, should a required change be found late in the database proofing process, DESI [Diebold] recommends the County not re-import their election set up file into the same database and instead build a new database. [16]
March 2004	ES&S Optical Scanner	**Lubbock County, Texas.**[17] 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. She said Omaha, Neb.-based ES&S, which prepared the vote tabulators, will foot the bill for the recount.
March 2004	Diebold AccuVote OS	**San Diego County, California.** Out of 208,446 ballots, the machines miscounted 2,821 votes in the Democratic presidential race and the Republican U.S. Senate seat. [18] Most of the absentee miscounts occurred in the Democratic presidential race, in which 2,747 votes cast for John Kerry were incorrectly credited to Rep. Dick Gephardt. In the Senate race, in which Bill Jones won, 68 votes cast for Barry L. Hatch were credited to candidate Tim Stoen, and six votes cast for James Stewart were credited to Stoen. [19] The miscounts occurred because multiple scanners simultaneously fed the absentee ballot data into the computer tabulation system. The large number of ballots and candidates on them overwhelmed the system. … "These performance failures are unacceptable," [County Chief Administrative Officer Walt] Ekard wrote [to Diebold]. "Having a reliable and trouble-free voting system is absolutely essential to the county. Your failure to provide such a system in the March election was extremely troubling and any issues that remain must be fully resolved long before the November election."

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[16] **Report of Assurances to Alameda County.** April 26, 2004. By Diebold Election Systems, Inc. Pages 2,3. http://www.truevotemd.org/ebold_rpt_alameda.pdf

[17] **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

[18] **New electronic scanners miscounted some county votes.** NC Times April 7, 2004; By: Gig Conaughton - Staff Writer; http://www.nctimes.com/articles/2004/04/08/news/top_stories/22_27_394_7_04.txt

[19] **Some votes miscounted in primary, officials say.** Union-Tribune. April 8, 2004. By Luis Monteagudo Jr. and Helen Gao, staff writers. http://www.signonsandiego.com/news/politics/20040408-9999-1m8vote.html

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Date	Equipment	Place/Description
May 2004	ES&S Optical Scanner (possibly M150)	**Craighead County, Arkansas.** The chip programmed by ES&S for the county's optical scanner gave one candidate all the votes for constable. A manual recount revealed the error.[20] 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. 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.
May 2004	ES&S Optical Scanner (possibly M150)	**Fulton County, Arkansas.** The chip programmed by ES&S for the county's optical scanner didn't work. ES&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&S was the weight of 16 ballots.[21] 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. ... 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.
May 2004	Diebold AccuVote OS	**Marblehead, Massachusetts.** Machine count showed 1834 to 1836. Manual recount showed 1831 to 1830, overturning the election outcome. [22] [Town Clerk Thomas] McNulty said new precinct totals would be available today. He said he was warned by the company that made the voting machines that, "When it's that close anything can happen." (Final decision reached three weeks after the election, after a hand recount.)
May 2004	ES&S M150 Scanner	**Sevier County, Arkansas.** The chip programmed by ES&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.[23] After consulting with officials from Election Systems & Software, it was determined that the codes on the computer chip and the codes on the ballot didn't match.

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

[21] **No explanation for ballot machine malfunction.** South Missourian; May 27, 2004; by George Jared, Staff Writer

[22] **Recount overturns result of Marblehead selectmen election.** The Daily Item; Wednesday, June 2, 2004; By Jack Butterworth. http://www.thedailyitemoflynn.com/news/view.bg?articleid=6313

[23] **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

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Date	Equipment	Place/Description
June 2004	Sequoia Insight Optical Scan	**Curry County, New Mexico.** The super-precinct feature, which totals the votes by Legislative district, gave incorrect totals.[24] Chief Deputy Clerk Coni Jo Lyman said officials at Ink Impressions, the Rio Rancho-based company that provided the Insight machines, told her the machines were capable of counting both ways [by precinct and canvassed]. But when county personnel attempted to get the super-precinct totals from the machines, the numbers were wrong. Election workers wound up counting the vote by precinct, which took extra time and labor.
June 2004	Sequoia Insight Optical Scan	**Dona Ana County, New Mexico.** Machines failed the pre-election testing and were used in early voting. In pre-election testing, counters that track the total number of ballots passed through the machine showed incorrect numbers. The counters in four out of five machines were incorrect, showing as many as 20 or 30 votes more than the actual number of ballots tested. Yet the machines were used in early-voting anyway.[25] State Bureau of Elections computer specialist Steve Fresquez said Wednesday his director, Denise Lamb, briefed him on a problem with Insight machines before she went home for the day. "The machines have a protective counter that records all the votes cast on them. That counter was reading transactions incorrectly and advancing extra numbers," he said.
July 2004	Diebold AccuVote OS	**Putnam County, Georgia.**[26] The optical scanner failed to read nine ballots. For Tuesday's election, the absentee and early voter ballots were counted through the optical scan system the county has used for its past elections. This also delayed vote counting because there were nine ballots that the optical reading machine could not read. These had to be read and certified by an official ballot divining board made up of one Republican, one Democrat and one non-partisan.

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[24] **Company denies problem with voting program.** Clovis News Journal. June 3, 2004. By Jack King: CNJ Staff Writer
http://cnjonline.com/engine.pl?station=clovis&template=storyfull.html&id=6358

[25] **Company denies problem with voting program.** Clovis News Journal. June 3, 2004. By Jack King: CNJ Staff Writer
http://cnjonline.com/engine.pl?station=clovis&template=storyfull.html&id=6358

[26] **Putnam County voting officials report few glitches on election night.** The Union-Recorder. By Merritt Melancon. July 22, 2004.
http://www.unionrecorder.com/articles/2004/07/22/news/news04.txt

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Date	Equipment	Place/Description
August 2004	ES&S Unity EMS	**Natrona County, Wyoming.** The Unity Election Management System, used to tally votes from both optical scan machines and paperless electronic voting machines, failed to tally votes correctly. [27] 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. 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. ... 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.
September 2004	Diebold AccuVote OS	**King County, Washington.** Although the optical scan software revisions intended to handle a new style of ballot were not qualified by an ITA, the state assigned provisional certification to the software after completing what the Secretary of State's office claimed was "extensive" testing. For example, in a letter to VotersUnite!, State Director of Elections Nick Handy defended the state testing process by stating that it included: Functional tests of each system to ensure that the variety of ways that a voter might mark a primary consolidated ballot will be counted in accordance with the new Washington State law. However, the functional tests didn't catch a major software design error that caused the machines to reject valid ballots. Precinct scanners rejected ballots with no party choice selected, even if the voter intended not to vote in partisan races. [28] Among the disgruntled in King County was attorney Rhys Sterling, who learned the ballot box wouldn't accept his ballot because he voted only on nonpartisan races and issues. After the machine returned his ballot, a poll supervisor at Hobart Community Church asked whether he had chosen a political party (he had not) and whether he had deliberately not chosen a party. His ballot was accepted only after the supervisor opened the machine and pressed a button overriding its programming. "So much for secret ballots," said Sterling, who claims that yesterday's voting procedures violate the state constitution's guarantee of "absolute secrecy" in preparing and depositing ballots.

[27] **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

[28] **Nonpartisan voters baffle ballot machines.** Seattle Times. September 15, 2004. By Keith Ervin, Seattle Times staff reporter.
http://seattletimes.nwsource.com/html/localnews/2002036002_primary15m.html

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Date	Equipment	Place/Description
September 2004	ES&S Optech 4-C	**Maricopa County, Arizona.** 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. The election was certified by Judge Eddward P. Ballinger Jr. [29] 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. 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. "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." ...All early ballots were read by the machines during the primary and on the day of the recount. However, **one machine registered an 18 percent variance in reading undervotes**, Hauser said.[30]
November 2004	Hart InterCivic Ballot Now	**Boulder County, Colorado.** Bar codes on the ballots were the wrong size, causing the system not to count the ballots. EagleDirect, the printer, accepted some of the responsibility, but also said that Hart had not informed them of the close tolerances required when printing.[31] Eagle CEO Bill Schaefer demonstrated one test ballot that, after being scanned once, was found to have one "damaged race" where the system could not process information for an individual race. The second time through, the system found more damaged races on the same ballot and read another race as an "undervote." The third test read everything on the front page of the ballot properly but one race was rejected on the back page. ... [Eagle president Howard] Harris said Hart did not inform Eagle about certain system tolerances until after the election. He said the system would reject races when the boxes on the paper ballot were not within plus-or-minus 20 percent of their expected position. He also said a Hart official told him the system could have worked using 30 percent tolerances, and Harris said he felt loosening the tolerance could have prevented occurrence of many of the damaged races.

[29] **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

[30] **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

[31] **Printer played role in Boulder voting woes.** Rocky Mountain News. November 10, 2004. By Berny Morson.
http://rockymountainnews.com/drmn/election/article/0,1299,DRMN_36_3317633,00.html. Archive:http://www.votersunite.org/article.asp?id=3770
Printer says ballots bear partial blame: Maintains most of fault lies with the new voting system. Boulder Daily Camera. January 29, 2005. By Eric Bontrager.

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November 2004	ES&S Unity EMS (2.2)	**Broward County, Florida.** A software flaw cause Broward County officials to initially report an inaccurate outcome for Amendment 4. [32] 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. "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. 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.
November 2004	ES&S Optical Scanner	**Brown County, Indiana.** The tally tape produced by the scanner in one precinct showed 63 unvoted ballots. The county considered recounting votes in that precinct, but were unable to.[33] "We were concerned about the machine or the pens that were used to mark the ballot," Clerk Benita Fox said. "We've never had that many unvoted ballots before. The law doesn't allow the election board to reject certification by the precinct board, so we didn't do anything. We will be looking at that problem in the future."
November 2004	ES&S M115 Optical Scanner	**Carroll County, Arkansas.** A mis-programmed chip from ES&S skewed the results from the JP District 2 race. [34] The glitch was discovered by Carroll County Election Commission members when they met to certify election results Monday at the Berryville courthouse. 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. 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.

http://www.dailycamera.com/bdc/county_news/article/0,1713,BDC_2423_3507736,00.html. Archive: http://www.votersunite.org/article.asp?id=4740
EagleDirect speaks. Colorado Daily. January 31, 2005. By Richard Valenty. Archive: http://www.votersunite.org/article.asp?id=4748

[32] **Broward Vote-Counting Blunder Changes Amendment Result.** News4Jax.com. November 4, 2004. http://www.news4jax.com/politics/3890292/detail.html
Archive: http://www.votersunite.org/article.asp?id=3696
Gambling vote glitch mars tally. Miami Herald. November 5, 2004. By Erika Bolstad And Curtis Morgan.
http://www.miami.com/mld/miamiherald/10103931.htm

[33] **3 more counties report errors.** Palladium Item. November 16, 2004. by Pam Tharp. Archive: http://www.votersunite.org/article.asp?id=3862

[34] **Computer glitch blamed for miscount in JP voting.** Carroll County Star Tribune. November 10, 1004. By Anna Mathews.
Archive: http://www.votersunite.org/article.asp?id=3889

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	ES&S Optical Scanner	**Carroll County, Indiana.** The county had to hand count county council votes in its 19 precincts on election day because the software doesn't comply with state law.[35] If a voter votes a straight Democratic ticket but picks one Republican in the at-large race, no votes count for the Democratic candidates. Only the Republican vote is counted. Carroll County had one Democratic candidate and two Republican candidates for county council, Sterrett said. A voter who marked a straight Democratic ticket but then voted for the two Republicans should have lost the vote for the Democratic council candidate, but ES&S's program would have counted all three votes, Sterrett said.
November 2004	ES&S EMS	**Collier County, Florida.** The ES&S tabulation software on the central computer added test votes to the real votes.[36] [Gary Beauchamp, deputy assistant supervisor of elections] said that while elections officials fixed the glitch they are still awaiting word from ES&S about what caused it so they can work on a plan to avoid a similar problem in future elections.
November 2004	Diebold Central Count OS	**Crittenden County, Arkansas.** More than 11% of the ballots failed to register a vote for president.[37] 1,853 of the county's 17,284 voters had selected more than one presidential candidate. Another 131 ballots were counted as having no checkmarks for president. About one in every eight ballots cast in Crittenden County failed to register a choice for president. Unusual ballot design elements and ballot programming errors may have contributed to the problems, but Secretary of State Charlie Daniels refused to allow a manual recount of the ballots.
November 2004	ES&S M100 Optical Scanner	**Flathead County, Montana.** Errors were detected in the optical scan tabulation system.[38] [T]wo precincts in, both showing an odd coincidence, no opposition to I-147 [which would reverse the ban on using cyanide in mining]. Next precinct scanned, same result. Then it got worse. New returns show a precinct voted well beyond the number of registered voters. "This is only our second election on this system. We're still learning the in's and out's of it, and with this volume of voting, we're just taking a few nicks," [Diane Murer, Flathead County Elections Office] explained.

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[35] **3 more counties report errors.** Palladium Item. November 16, 2004. by Pam Tharp. Archive: http://www.votersunite.org/article.asp?id=3862

[36] **Software glitch blamed for delay in election results.** Naples Daily News. November 4, 2004. By Cathy Zollo. Archive: http://www.votersunite.org/article.asp?id=3879

[37] **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

[38] **Flathead Recount.** KECI13 News. November 3, 2004. Archive: http://www.votersunite.org/article.asp?id=3994

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	Diebold Optical Scanner	**Franklin County, Indiana.** Tests conducted on the optical scanner before the election found no problems. Yet during the election, it gave straight-party Democrat votes to Libertarians, affecting the outcome of the county commissioners' race.[39] When votes in southeastern Indiana's Franklin County were recounted by hand Thursday night, Democrat Carroll Lanning leaped from fifth to third in the three-seat commissioners race and Republican Roy Hall fell to fifth. The vendor, Fidlar, admitted they were to blame for the programming error.[40]
November 2004	ES&S Optical Scanner	**Lancaster County, Nebraska.** 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&S referred to the misread as a mechanical problem. [41] 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. ... 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 & Software to count absentee ballots — and found that two were not correctly matching results. That came as a surprise, Shively said, because all were tested late last week and performed well. After consulting with ES&S, Shively decided to use the two absentee-ballot machines to speed up the election-day counting. But the problem was apparently contagious. 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. **Then the two-ballot problem described by Shively began, plaguing almost all the machines,** drastically slowing the count.

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[39] **Recount changes one Franklin Co. race.** IndyStar.com. November 12, 2004. Associated Press. Archive: http://www.votersunite.org/article.asp?id=3804

[40] **Fidlar admits election blip.** Quad City Times. November 13, 2004. By Tory Brecht. Archive: http://www.votersunite.org/article.asp?id=3816

[41] **Problem machines spur call for recount.** Lincoln Journal Star. November 3, 2004. By Nate Jenkins.
http://www.journalstar.com/articles/2004/11/14/election/doc4189b9c7f14bf764391458.txt. Archive: http://www.votersunite.org/article.asp?id=3846

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	ES&S M150 Scanner	**Pike County, Arkansas.** A damaged optical scanning machine lost nearly 700 votes. [42] "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." "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."
November 2004	ES&S Central Scanner	**Sandusky County, Ohio.** 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 in nine precincts had been fed through machine more than once.[43] Barb Tuckerman, director of the Sandusky County Board of Elections, said when she reviewed election information Nov. 8 she discovered the mistake. "Clyde had 131 percent voting," Tuckerman said. "That's not possible. I knew there was something amiss."
November 2004	ES&S Optical Scanner	**Sarpy County, Nebraska.** Election officials ended up with around 10,000 phantom votes (more votes than voters). They still don't know what went wrong. [44] 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 war, I thought something's not right." He's right. There are not even 3,000 people registered to vote in his ward. For some reason, some votes were counted twice. Deputy Sarpy County Election Commissioner Ed Gilbert says, "It affected 32 of the 80 precincts. And I suppose as many as 10,000 votes." … No one is sure exactly what went wrong. VotersUnite contacted the Sarpy County Elections office and was told that ES&S had analyzed the problem and determined it to be "mechanical and procedural." That was all the election staff knew.

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[42] **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. Archive: http://www.votersunite.org/article.asp?id=4362

[43] **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. Archive: http://www.votersunite.org/article.asp?id=3866

[44] **Countinghouse Blues: Too many votes.** WOWT Omaha. November 5, 2004. http://www.wowt.com/news/headlines/1161971.html

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	ES&S Optical Scanner & EMS	**Wichita County, Texas.** Optical scanners were unable to produce a reliable count of Tuesday's election ballots.[45] 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. Election officials believe machines are counting votes correctly but that computer programs that process results are malfunctioning. No one knows what the problem is, Republican County Chairman Carolyn Nicholas said.
November 2004	Hart InterCivic Ballot Now	**Yakima County, Washington.** When the votes for Governor were recounted manually, it was discovered that the Ballot Now system had failed to read the votes on 24 scanned ballots. A white line extending the length of the page had caused the ballots to be treated as "damaged." The administrator had turned on the "autoresolve" feature, and the Ballot Now system misread the voters' intents.[46] **June 2005 update:** Travis Harrell, a manager at Hart InterCivic, reported the results of an investigation his company had been carrying out.[47] 1. The scanned ballot images of the 24 ballots in question (Batch 86, Pct 3301) all contain a white vertical line spanning the entire length of the ballot. The line runs directly through the left portion of all option boxes in the 4th column of each ballot. The line was most likely caused by a small foreign object (dirt or paper debris) in the scanner that subsequently dislodged. 2. Since the white line "whited out" a portion of each option box, Ballot Now was unable to detect at least 90 percent of each "target box" and therefore classified each contest in the 4th column of each ballot as a Damaged Contest. **October 2005 update:** the User's Guide for the Kodak scanner points out that a white vertical line on the image can be caused by a dirty imaging guide. The manual recommends that the imaging guide — and other internal part of the scanner — be cleaned after eight hours of use.

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[45] **Waiting in Wichita; Count could resume today.** Times Record News. November 4, 2004. By Robert Morgan. Archive: http://www.votersunite.org/article.asp?id=3690

[46] **Errors in Skagit vote count point to statewide problem.** Skagit Valley News. December 3, 2004. By James Geluso. Archive: http://www.votersunite.org/article.asp?id=4068

Hart InterCivic Optical-Scan Has A Weak Spot. July 5, 2005. by John Gideon. http://www.votersunite.org/info/yakimaproblemreport.asp

[47] Email from Mr. Harrell to Diana Soules, Yakima County Election Manager. http://www.votersunite.org/info/Yakimaproblemreportemail.pdf

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
December 2004	ES&S M650 Central Scanner	**Skagit County, Washington.** An investigation of anomalies in the recount of the governor's race led county officials to learn from ES&S that a vote is counted incorrectly in approximately 1 in 10,000 ovals read by their high-speed optical scanner. Since the governor's race had four options, the estimate is that 1 in 2500 votes was counted incorrectly. [48] The machines used by Skagit County to tally votes made at least 36 mistakes in the count for the governor's race, which was decided by just 42 votes statewide. … In Skagit County, errors occurred when the machines either counted a ballot twice in the first count, or missed counting a ballot in the second count, said Skagit County Elections Supervisor Erika Kubischta.
March 2005	ES&S Optical Scanner	**Taylor County, Wisconsin.** Four and a half months after the election, a consulting firm discovered that ES&S had programmed the optical scanners incorrectly, failing to account for partisan elections. The inaccurate programming caused all straight-party votes in Medford to be lost, affecting approximately 27% of the ballots. [49] 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. "There's really nothing voters can do at this point," said Kevin Kennedy, the executive secretary of the State Elections Board. ES&S acknowledged that it was to blame for the error that escaped notice until it was caught by an independent firm. Medford and Taylor County officials have been told by Nebraska-based Election Systems & 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.

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[48] **Errors in Skagit vote count point to statewide problem.** Skagit Valley News. December 3, 2004. By James Geluso.
Archive: http://www.votersunite.org/article.asp?id=4068

[49] **About 600 Medford ballots cast in November ignored.** Mar 12, 2005. Marshfield News-Herald.
http://www.wisinfo.com/newsherald/mnhlocal/284049485656926.shtml. Archive: http://www.votersunite.org/article.asp?id=5061

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2005	ES&S Optical Scanner	**Forrest County, Mississippi.** The number of ballots counted by the optical scanner didn't match the number of votes reported by the computer.[50] There were also some discrepancies in the Ward 4 Republican race between Andrew Ellard, Lloyd B. "Rink" Russell and Brian Lucas. The problem? ES&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. The *right* type of counter - an infrared machine instead of a visible light machine - arrived Thursday night. 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.
October 2005	Hart InterCivic Ballot Now	**Boulder County, Colorado.** The optical scan system, designed specifically for absentee ballots, misread seven out of 429 folded test ballots. [51] Despite assurances that Boulder County's $1.4 million ballot-counting system would operate smoothly in the upcoming election, the equipment will not be trusted to properly read ballots where a fold passes through a ballot item, elections officials said Friday. Election workers discovered the glitch Thursday while running 429 ballots through Hart InterCivic scanners during a test, elections coordinator Josh Liss said Friday. "Depending on how the ballot is folded, if the fold crosses an option box, it's possible the machine could misread it," he said. One Boulder County citizen pointed out the irony in the flawed design. Voting activist Joe Pezzillo, who fought the county's purchase of the Hart equipment and supported scrapping it after last year's rocky election, said he is disappointed that a system that is supposedly ideal for mail-ballot elections cannot read ballots that are folded and mailed. "This is what it's good at. This is the kind of functionality we get when it's working at its best," he cracked. "This is the type of foible people encounter when they don't know how to analyze a voting system for purchase."

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[50] **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

[51] **County voting faces more woes. Equipment has trouble reading folded ballots.** Longmont FYI . October 8, 2005. By Brad Turner, The Daily Times-Call.
http://www.longmontfyi.com/Local-Story.asp?id=4040

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2005	ES&S optical Scanner	**Cumberland County, Pennsylvania.** Flawed ballot programming of straight-ticket votes hands the race to the wrong candidate for magisterial district judge. Straight-ticket Democrat votes were given to the Republican candidate. Straight-ticket Republican votes were not counted at all.[52] A 9.5-hour hand recount produced a new winner Thursday in the election for magisterial district judge for the Carlisle area. [A] programming error by the county's ES&S voting machines awarded all votes by Democrats casting a straight-ticket ballot to Keating. The problem involved a software coding error in which Keating's political affiliation was mislabeled as Democrat. Straight-ticket Republican votes were not awarded to either candidate. So the hand recount subtracted straight-ticket Democrat votes from Keating's total and added straight-ticket Republican votes. Meanwhile, Rhoades gained straight-ticket Democrat votes.
November 2005	[Not known]	**Somerset County, Pennsylvania.** Scanners rejected valid ballots. [53] [O]fficials said every ballot without votes on the separate retention ballot was kicked out of the system, slowing the count considerably. "It was very frustrating," [County Commissioner Jimmy] Marker said. "It was also frustrating for the two people working the machines who had been standing for six hours without a break and with a stack of ballots a mile high."

[52] **DJ race still up in the air.** Sentinel, November 11, 2005. By John Hilton. http://www.cumberlink.com/articles/2005/11/11/news/news02.txt
Archive: http://www.votersunite.org/article.asp?id=6323

[53] **Machines delay ballot counting.** The Tribune-Democrat. November, 9 2005. By Kirk Swauger. http://www.tribune-democrat.com/local/local_story_313232449.html?keyword=secondarystory. Archive: http://www.votersunite.org/article.asp?id=6299

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
March 2006	Diebold AccuVote OS	**Grafton, New Hampshire.** Two vote tabulators were seized by the state's Attorney General after malfunctioning during elections held on March 14.[54] No matter how you do the math, 193 "yeas" plus 198 "nays" don't add up to 369 votes. That faulty equation — results of a warrant article vote from Tuesday's election ballot — was the first clue for Grafton town officials that something was wrong. .... The margin of error could end up changing the outcome of two important warrant articles, [Town Clerk Mary] McDow said — one for a new police cruiser and the other for a compactor for the town's recycling center. Officials speculate that a dip switch on the machine was set incorrectly. However, [Grafton Selectman Jennie] Joyce said she is in favor of recounting ballots, both by hand and by machine. "It's not be such a bad idea, just to test the accuracy of the machine," Joyce said.
March 2006	ES&S Optical AIS 315	**Webb County, Texas.** ES&S blamed by county for errors in programming and inadequately training county staff.[55] The company prepared all software for the election. Additional problems cited include delays of three days before receiving coding for electronic ballots, following mistakes involving receipt of nearby McMullen County codes,

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[54] **Voting machines removed from Grafton.** Union Leader, March 16, 2006 by Carol Robidoux.
   Story archived at http://www.votersunite.org/article.asp?id=6557

[55] **Election Uproar; County officials say there were plenty of red flags** Laredo Morning Times, March 14, 2006 by Julie Daffern. Story archived at
   http://www.zwire.com/site/index.cfm?newsid=16299334&BRD=2290&PAG=461&dept_id=473478&rfi=8

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2006	Diebold AccuVote OS	**Barry County, Michigan.** Optical scanners "scramble" results. Officials have to do the count by hand.[56] Hastings city clerk Tom Emery did a double take. "In the first precinct that we looked at, one candidate got zero votes, but there were 90 write-ins out of 125 votes cast," he said. "Especially since the person who got zero votes was the person that I voted for, so I knew the zero was wrong." In the Thornapple school board race, the computer had both candidates with zero votes, but the write-in total was 35. The biggest problem, said Barry County clerk Debbie Smith, was for races dealing with bond proposals. "All of the printouts where there were any bond proposals showed a zero total for a yes vote," she said, "and it appears the actual votes cast as yes showed under the no total and the no total wasn't appearing on the tape anywhere." The cause? "It would all be speculation at this point," Smith said, "whether the problem was with the actual ballot printing or with the memory card programming."
May 2006	ES&S Optical Scanner	**Cleburne County, Arkansas.** ES&S mis-programs ballot scanners.[57] Cleburne County cannot report results due to scanner malfunctions. The county plans to conduct a hand count of the ballots.
May 2006	Diebold AccuVote OS	**Cuyahoga County, Ohio.** Optical scanners fail to tabulate properly. With all the problems reported at the polls Tuesday, NewsChannel5 has learned that the absentee results will be delayed. About 17,000 absentee votes will have to be hand counted because of a problem with optical scanners. David Bear, spokesman for Diebold Inc., which supplies Cuyahoga's machines, said the absentee counting problem appears to be isolated. The ovals on the ballots printed by the county did not line up properly for optical scan machines to count them, he said.[58]

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[56] **Glitch hits Barry County voting machines** WoodTV8, May 3, 2006 by Dan Bewley. Story is archived at
http://www.woodtv.com/Global/story.asp?S=4855576&nav=0Rce

[57] **Voting machine problems** KARK4, May 23, 2006 (no byline). http://www.kark.com/news/default.asp?mode=shownews&id=6421

[58] **Confusion, delayed results mark first punch-card free election** The News Sentinel, May 3, 2006 by Matt Leingang. Story is archived at
http://www.fortwayne.com/mld/newssentinel/14484080.htm

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2006	ES&S Optical Scanner	**Luzerne County, Pennsylvania.** Unofficial tallies differ by nearly 6,000 votes from official ballot counts. Candidates are considering calling for recounts.[59] Officials say extra votes were counted because of tabulation errors, and some candidates' vote totals are hundreds of votes less than totals from the unofficial count, which was conducted after the polls closed on election night, May 16. The tabulations errors in Luzerne County came about because the election machine vender, Nebraska-based Election Systems & Software, didn't reset a counter on a machine that scanned paper ballots, officials said.
May 2006	ES&S Optical Scanner	**Phillips County, Arkansas.** Tabulators, with flawed ballot programming furnished by ES&S, mistook 432 Democratic votes for Republican and fail to count them in the Democratic primary. [60] Several days after the Election Commission certified that race and Crumbly and Willis began campaigning for the June 13 runoff, commission staff discovered that 432 votes cast at Allen Temple in Phillips County had mistakenly been counted as Republican ballots, effectively nullifying them. The malfunctioning ballot tabulating machine was programmed by Election Systems & Software, the Omaha, Neb.-based company that in November signed a $ 15 million contract to provide election equipment to Arkansas counties. Ballot programming problems in Phillips County also affected the House District 41 contest. [61]
June 2006	ES&S M100 Optical Scanner	**Pottawattamie County, Iowa.** Flawed ballot programming by ES&S reported results of all nine contested primary races incorrectly. [62] Pottawattamie County elections deputy Gary Herman said anomalies were noticed almost immediately. Electronic results were posted, but with a disclaimer that ballots would be hand-counted the next day. The results were dramatic. **Every winner in Pottawattamie County's nine contested races turned out, in retrospect, to be a loser.** Initial returns that showed incumbent Recorder John Sciortino losing by a margin of 1,245 votes to 1,167 was found to have actually won the election 2,061 votes to 347.

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[59] **Errors discount election more** Times Leader, May 23, 2006 by Michael P. Buffer. Archive: http://www.timesleader.com/mld/timesleader/14645342.htm

[60] **District 16 recount sought; 432 lost votes cited in suit.** Northwest Arkansas News Source, June 24, 2006. By Daniel Nasaw.
http://www.nwanews.com/adg/News/158589/. Archive: http://www.votersunite.org/article.asp?id=6605

[61] **Vendor bender. City clerk blames ES&S for Election Day difficulties.** Times Record News. May 14, 2006. By Robert Morgan.
Archive: http://www.votersunite.org/article.asp?id=6598

[62] **Polk County recorder to contest election.** The Des Moines Register, June 24, 2006. Bert Dalmer, Register Staff Writer.
http://desmoinesregister.com/apps/pbcs.dll/article?AID=/20060624/NEWS05/606240322/1001. Archive: http://www.votersunite.org/article.asp?id=6607
Faulty voting machines delay results; counting under way. The Daily Nonpareil Online. June 7, 2006. by Tim Rohwer, Staff Writer.
http://www.zwire.com/site/news.cfm?newsid=16751509&BRD=2703&PAG=461&dept_id=555106&rfi=6
Archive: http://www.votersunite.org/article.asp?id=6571

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
June 2006	ES&S Optical Scanner	**St. Francis County, Arkansas.** A recount of the State Senate District 16 runoff primary race reversed the initial, incorrect results caused by a ballot programming error.[63] Results in the Senate District 16 originally showed Representative Arnell Willis of Helena-West Helena defeating Earle School Superintendent Jack Crumbly by 28 votes. However, a recount in St. Francis County on Monday gave Crumbly 100 more votes, making him the winner. Election officials had said earlier that a tabulation error had resulted in 100 fewer votes being counted for Crumbly. St. Francis County Election Commission Chairman Frederick Freeman apologized to the candidates.
November 2006	ES&S M100 Precinct Scanner	**Butler County, Iowa.** A ballot programming error cause ballot scanners to read straight-party votes incorrectly, notifying voters that they were missing votes in all races. The ballot programming error was made in-house.[64] "The voter then is thinking, 'Oh my God, it didn't vote for the people I wanted to vote for,' " county Auditor Holly Fokkena said. However, all the ballots were being tabulated correctly, she added.
November 2006	Diebold AccuVote OS	**Cuyahoga County, Ohio.** Diebold scanner fails one of four pre-election tests.[65] In each test, a deck of ballots with known results is run through scanners and the known totals are compared with the results from the machines, which are made by North Canton-based Diebold Inc. One of the tests Wednesday didn't match, [Michael Vu, director of the county board of elections] said. The problem may be as simple as identifying some scanners which may be too sensitive under certain conditions. Scanners which may be unreliable and need adjusting are then set aside and replaced, he said. "It's not unusual in the testing that we find an anomaly. Our testing is going over and beyond the normal testing of the past."
November 2006	ES&S M100 Optical Scanner	**Fayette County, West Virginia.** Programming in the scanners tabulated the votes incorrectly. County Clerk Kelvin Holliday had instituted a cross-checking system and discovered that tallies didn't match. Correcting the tallies changed the margins in several races.[66] "The software failed us ... Those who voted on paper ballots were potentially being disenfranchised in Fayette County."

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[63] **Recount In AR Race Reverses Result.** Eyewitness News. June 20, 2006. http://www.myeyewitnessnews.com/news/local/story.aspx?content_id=3734B371-B2D5-416C-9A72-D1AF88685953. Archive: http://www.votersunite.org/article.asp?id=6606

[64] **Voting snags are resolved quickly, Iowans report.** Des Moines Register. November 8, 2006. By Jennifer Jacobs. Archive: http://www.votersunite.org/article.asp?id=6807

[65] **Cuyahoga County elections staff probe inaccurate scan test.** Contra Costa Times. By M.R. Kropko, Associated Press, November 3, 2006. Archive: http://www.votersunite.org/article.asp?id=6717

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	ES&S Optical Scanner	**Greenville County, South Carolina.** The county had to count by hand at least 600 absentee ballots that optical scanners failed to count.[67]
November 2006	ES&S 550 Central Scanner	**Jackson County, Oregon.** Scanners miscount, jam, and fail to read blue ink.[68] Two new Elections System and Software 550 scanning machines have been put out of commission because they were involved in the miscount of Precinct 2 in Ashland. In addition, ballots jammed during the election as they were fed into the four 550 counting scanners, creating headaches for Elections Center staff. And though the Elections Center upgraded the machines to read blue ink and black ink, the scanners didn't work as [County Clerk Kathy] Beckett had hoped. "They said they would count blue ink, but it counts some blue ink but not all," she said.
November 2006	Diebold AccuVote OS	**Marin County, California.** Scanner problems in many precincts. Some scanners wouldn't accept the first page of the ballot.[69] "It refused to take the first ballot page it didn't get counted," [Gordon Chan, a voter] said. "(Poll workers) put it in a box and said they would count it later. It's kind of disconcerting, it says you voted but it doesn't tell you whether you voted completely."
November 2006	ES&S M100 Precinct Scanner	**Pottawattamie County, Iowa.** A software programming error on the ES&S tabulator delayed counting.[70] "The ballots are fine, the machines are fine, it's the program for the counting equipment," county Auditor Marilyn Jo Drake said. "That's nothing my office can check."

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[66] **Fayette glitches lead to all-night vote count.** The Register-Herald. November 8, 2006. Amelia Pridemore. http://www.register-herald.com/BNIgolf/local_story_312231202.html?keyword=topstory. Archive: http://www.votersunite.org/article.asp?id=6817

[67] **Hendersonville voters back building height restriction.** Tryon Daily Bulletin November 13, 2006. Archive: http://www.votersunite.org/article.asp?id=6861

[68] **Who wins the race in Ashland? Problems with ballot count continue to confound county elections officials.** Mail Tribune. November 14, 2006. By Damian Mann. http://archive.mailtribune.com/archive/2006/1114/local/stories/ash-election-folo.htm. Archive: http://www.votersunite.org/article.asp?id=8408

[69] **Snafus, irregularities at Bay Area polling stations.** San Francisco Chronicle. November 7, 2006. By Marisa Lagos, Demian Bulwa and Carl Nolte, Staff Writers. http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/11/07/BAGROM7KQ27.DTL&type=politics. Archive: http://www.votersunite.org/article.asp?id=8405

[70] **Voting snags are resolved quickly, Iowans report.** Des Moines Register. November 8, 2006. By Jennifer Jacobs. Archive: http://www.votersunite.org/article.asp?id=6807

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	Diebold AccuVote OS	**Waterville, Maine.** One of the scanners reported 27,000 votes in a town with about 11,000 registered voters. All 5,000 ballots were rescanned.[71] [City Clerk Arlene Strahan] said the malfunction remains puzzling. Before Election Day, Strahan said she ran standard tests on the city's seven tabulators and each worked properly. Strahan said LHS Inc. is phasing out the machines and will no longer provide technical support. The city already has some money dedicated to buying replacements, but voting machines are not cheap. Strahan said they cost about $6,000 each.
November 2007	ES&S M100 Precinct Scanner	**Ashtabula County, Ohio.** A ballot programming error prevented the tabulator machines from accepting more than one name on the ballot in multiple-candidate races. The ballots were counted by hand.[72] "It was a coding error," [Richard Hornstein, county election board director] said. "It just happens."
November 2007	ES&S M100 Precinct Scanner	**Lawrence County, Ohio.** A ballot programming error, by ES&S, on the M100 tabulator caused the votes for Hamilton Township trustee to be reversed.[73] Lawrence County Board of Elections Deputy Director Eric Bradshaw said the results were flipped, that Bill Robinson is the actual winner with 374. Allan Blankenship got 170 votes. "It was a programming error and that race got recorded exactly opposite," he said. "I don't know what happened. We have people coming in from ES&S software in Omaha and a programmer from Columbus."
January 2008	ES&S M100 Precinct Scanner	**Sacramento County, California.** M100 optical scanners malfunctioned in many ways during the pre-election "logic and accuracy" tests.[74] With some machines, the ballot could not be loaded at all, or only accepted if loaded in backwards. In some cases, Democratic votes were not being recorded by a scanner. With other machines, it would be Republican votes that were not recorded. And with some machines, there were no problems at all. With the election within two weeks, [County Registrar of Voters Jill] Lavine decided to forego using the scanners altogether, and count the ballots centrally at the county election office.

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[71] **Results slowed by machine trouble.** Morning Sentinel. November 9, 2006. By Colin Hickey. Archive: http://www.votersunite.org/article.asp?id=6810

[72] **Coding error delays school board results.** The Star Beacon. November 6, 2007. By Mark Todd. http://www.starbeacon.com/local/local_story_310232605.html. Archive: http://www.votersunite.org/article.asp?id=7301

[73] **Township race result flipped because of error.** The Ironton Tribune, November 8, 2007. By Mark Shaffer. Archive: http://www.votersunite.org/article.asp?id=7331

[74] **Voting equipment problems in Sacramento lead to change of plans.** California Voter Foundation. January 23, 2008. By Kim Alexander. http://calvoter.org/news/blog/2008_01_01_blogarchive.html#8346006591992454113

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
February 2008	Hart InterCivic eScan	**Colorado.** State testing discovered that the eScan optical scanner continues to have the problem that led to its initial decertification in the State. It fails to detect and count marks on the ballot consistently, leading to inaccurate results.[75] The machines, known as optical scanners, too often read stray marks as votes, even if they are just the tiny dots from somebody resting a pen on the ballot before marking a box, according to the reports.
March 2008	ES&S M100 Precinct Scanner	**Sacramento County, California.** During pre-election test in January, some ballots were rejected or misread, including some valid votes that were not recognized at all by the M100 precinct scanner used at precincts across the county.[76] During its investigation, the county said that the vendor that supplies and maintains the scanners, Elections Systems & Software, conducted improper recalibration and preventive maintenance on the machines in December. In addition, the report said that ballots printed by Consolidated Printers were too dark to allow the ballot to be correctly read by the faulty scanners.
August 2008	Diebold EMS	**Hillsborough County, Florida.** The optical scan vote counting system failed to report votes properly from the two scanners.[77] In the GEMS software, [Director of Government Affairs for Premier Kathy] Rogers said, settings were not aligned between the two types of machines used Tuesday to read ballots that were cast. One machine, called OSX, was used at the precincts to tabulate early voting and Election Day voting. The other one, which made its debut with Premier software in Sarasota and Hillsborough counties, is called PCS and read all the absentee ballots.

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[75] **Vote scanners still face doubts.** Denver Post. February 17, 2008. By John Ingold. http://www.denverpost.com/headlines/ci_8283953.
Archive: http://www.votersunite.org/article.asp?id=7544

[76] **Machine vendor miscalibrated vote scanners, county officials say.** The Sacramento Bee. March 24, 2008. By Bobby Caina Calvan. Archive:
http://www.votersunite.org/article.asp?id=7613

[77] **Vendor blamed for optical scan problems.** WMNF Evening News. August 27, 2008. By Seán Kinane. http://www.wmnf.org/news_stories/6039.
Archive: http://www.votersunite.org/article.asp?id=7862

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
August 2008	Sequoia 400C Optical Scanner	**Palm Beach County, Florida.** A month of primary recounts twice flipped the winner in a local judicial race and revealed grave problems in the county's election infrastructure, including optical scanners that are literally unable to produce the same results twice. Early in October, a test conducted by the county revealed the unreliability of the scanners.[78] [Gerald Richman, an attorney who witnessed the tests firsthand] said the county then re-scanned two batches of 51 ballots each that had initially been rejected for having no vote cast in the judicial race, but that were found in a manual examination to contain legitimate votes for one candidate or the other. The first batch of 51 ballots were found to have legitimate votes for Abramson. The second batch of 51 ballots were found to have legitimate votes for Wennet. In the ballots containing votes for Abramson, 11 of the 51 ballots that had previously been rejected as undervotes were now accepted by one of the machines as having legitimate votes, and the remaining 40 ballots were rejected as having no vote. In the ballots containing votes for Wennet, the same machine accepted 2 ballots and rejected 49.
September 2008	Sequoia Optical Scaners	**District of Columbia.** About 3,500 write-in votes were recorded in the initial results. Officials investigated and discovered there were only about 450. [79] Initially, officials speculated that the error was caused by a defective memory cartridge, but a week later, the problem remained unexplained. The DCBOEE is initiating an investigation.[80] Cheh, chairman of a special council committee probing the primary and overall board operations, said she issued the subpoena to Sequoia Voting Systems, the company that provides the city's voting equipment, because there is no time to waste. "This is less about my worry that they will or will not be cooperative . . . and more about getting everything underway right away," Cheh said, adding that the committee will hold a hearing Oct. 3. "We are all on a short timeline."

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[78] **Florida Primary Recount Reveals Grave Voting Problems One Month Before Presidential Election.** Wired. By Kim Zetter. October 7, 2008.
http://www.wired.com/threatlevel/2008/10/florida-countys/

[79] **DCBOEE Issues Statement; Nickles Investigating Voting Irregularities.** DCist. September 10, 2008.
http://dcist.com/2008/09/10/nickles_investigating_voting_irregu.php. Archive: http://www.votersunite.org/article.asp?id=7917

[80] **Firm Subpoenaed in Vote Tally. Errors Add to Election Board's Concerns About November.** Washington Post. September 19, 2008. By Nikita Stewart and Mary Pat Flaherty, Staff Writers. http://www.washingtonpost.com/wp-dyn/content/article/2008/09/18/AR2008091803736.html.
Archive: http://www.votersunite.org/article.asp?id=7935

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
September 2008	ES&S M100 precinct Scanner	**Plymouth Township in Wayne County, Michigan.** A recount showed 78 less votes than originally reported in the Township Clerk contest. Two of the four precincts could not be recounted according to state law, since the number of ballots did not match the voters signed in. The 78-vote decrease occurred in only two of the precincts.[81]
October 2008	Sequoia 400C Optical Scanner	**Palm Beach County, Florida.** High-speed optical scanners are reading the creases in absentee ballots as votes. Overvotes are being rejected and duplicated on unfolded ballots for re-scanning. [82] "The creases, sometimes they fall close to a race," explained acting elections supervisor Brad Merriman on Friday. "And if they do, that might cause the ballot to not be read properly through the high speed tabulators." State Representative Mary Brandenburg requested a hand recount, pointing out that if a voter did not vote in a race, but a machine mistakenly read a crease as a vote, no one would ever know. Sequoia and the elections office agreed that was possible, but the Secretary of State's office denied the request for a recount.[83]
November 2008	Diebold AccuVote OS	**Blackhawk County, Iowa.** A hand recount showed seven less ballots than the optical scanner reported in the Waterloo precinct. In another precinct, 18 valid votes were found on the 19 ballot rejected by the scanner.[84]
November 2008	Hart InterCivic Ballot Now	**Boulder County, Colorado.** Ballots are scanned by a Kodak scanner and the votes are tabulated by analyzing the images. The system was misreading some ballots because of a vertical streak on the image. The county speculates that this streak was caused by dust on the ballots, possibly coming from the creases after the mail-in ballots were folded.[85] The dust is making the optical scanners think some people overvoted or filled in too many boxes. ... Dust on the scanner lens can cause a faint streak to appear vertically down a scanned ballot.

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[81] **Canvassers uphold decision in Plymouth Township recount.** The Journal Newspapers. September 6, 2008. By Lester L. Holmes, Jr. http://www.journalgroup.com/Plymouth/8342/canvassers-uphold-decision-in-plymouth-township-recount. Archive: http://www.votersunite.org/article.asp?id=7908

[82] **New Wrinkle.. That is, Crease.. in Tabulating Votes.** WPEC TV. October 31, 2008. By Chuck Weber. http://www.cbs12.com/news/ballot-4710488-vote-absentee.html. Archive: http://www.votersunite.org/article.asp?id=8099

[83] **Ballot Crease-Vote Counting Controversy Grows.** WPEC TV. November 3, 2008. By Chuck Weber. http://www.cbs12.com/news/vote-4710522-absentee-ballot.html. Archive: http://www.votersunite.org/article.asp?id=8110

[84] **Rogers requests total recount; Danielson clings to lead by 14 votes.** WCF Courier. November 13, 2008. By Jens Manuel Krogstad. http://www.wcfcourier.com/articles/2008/11/13/news/local/doc491b5b36bef3f013959179.txt. Archive: http://www.votersunite.org/article.asp?id=8230

[85] **Blame Game In Boulder Ballot Counting Snafu Begins: Dust, Creases Slow Ballot Count In Boulder.** The Denver Channel (ABC 7 News). November 6, 2008. http://www.thedenverchannel.com/news/17895498/detail.html. Archive: http://www.votersunite.org/article.asp?id=8404

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2008	ES&S M100 Optical Scanner	**Centre County, Pennsylvania.** Vote-counting errors on the optical scanners:[86] Officials said there was a difference in how one of the new Optiscan machines counted the votes in the 26th precinct, as opposed to the actual number of ballots cat (sic). Workers were counting the ballots by hand as of noon. Similar vote count problems with two other State College precincts were corrected early Wednesday.
November 2008	ES&S Optical Scanner	**Crawford County, Kansas.** A scanner error reading ballots affects four races, and could affect the outcome of the already tight Crawford County attorney's race. The M100 scanners were not programmed to handle the rotation of candidates on the ballots.[87]
November 2008	Sequoia EMS	**District of Columbia.** After reviewing the November 4 election results, Councilmember Mary M. Cheh, has determined that there are irregularities that suggest systemic problems in the District's election software. Anomalies include:[88] ♦ In Single-Member-District 6B11, which houses the District of Columbia Jail, the final unofficial election results showed no precinct reporting and 5 undervotes. ♦ In the Single-Member-District 5C09, which is located in precinct 74, there were 15 votes cast in a different precinct (73), where no voters were eligible to vote in that Advisory Neighborhood Commissioner race. ♦ According to registration statistics provided to the Council, 2 voters are registered to vote in SMD 6C09 in precinct 1. The election results show three votes for Single-Member-District 6C09 Advisory Neighborhood Commissioner candidate, Charley Docter.

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[86] **Centre County Recounts Ballots After Discrepancy.** WJACTV.com. November 5, 2008. http://www.wjactv.com/news/17900285/detail.html.
Archive: http://www.votersunite.org/article.asp?id=8163

[87] **Error comes from voting machine programming.** The Morning Sun. November 7, 2008. by Kevin Flaherty.
http://www.morningsun.net/news/x635432391/Error-comes-from-voting-machine-programming. Archive: http://www.votersunite.org/article.asp?id=8192

[88] **More DC Voting Problems.** WUSA9. November 11, 2009. by Bruce Johnson. http://www.wusa9.com/news/local/story.aspx?storyid=78192&catid=158.
Archive: http://www.votersunite.org/article.asp?id=8215

EMS Miscounts and Other Failures

The Election Management System typically resides on a computer in the central office. Vote data from the scanners is uploaded to the EMS computer, either directly from memory cards or via modem. The EMS aggregates the votes and prepares the reports of results.

Most of the 35 malfunctions in this section caused the results to be reported incorrectly. In some cases, the system slowed down or crashed.

Date	Equipment	Place/Description
November 1998	ES&S EMS	**Dallas County, Texas**. A programming error lost 41,015 votes.[89][90] 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. ...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.
November 2000	Diebold AccuVote OS	**Volusia County, Florida.** Internal Diebold memos (leaked in 2003) show that the company officials knew about the 16,022 Gore votes that were subtracted, and they still don't have an explanation for why the votes were lost. Tampering may have been the cause. The memos show that more than a year ago, Diebold knew of a problem with the Florida 2000 election - where a memory card inexplicably subtracted 16,022 votes from a total previously recorded for Vice President Al Gore. Tampering was one of four possible causes Diebold couldn't rule out at the time, the memos show. ... "The problem precinct had two memory cards uploaded," wrote Diebold tech Tab Iredale in one of the memos among Diebold employees. "There is always the possibility that 'the second memory card' came from an unauthorized source."[91]

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[89] **Black Box Voting** by Bev Harris, Chapter 2. http://www.blackboxvoting.org/bbv_chapter-2.pdf

[90] **Who Counts The Votes?** By Gary Ashwill and Chris Kromm. http://www.southernstudies.org/reports/votingmachines-new.htm

[91] **[Tulare] County votes for machines.** By Roger Phelps, The Porterville Recorder; June 10, 2004.
http://myopr.com/articles/2004/06/10/news/local_state/news01.txt

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2002	ES&S EMS	**Baldwin County, Alabama.** Tabulation machine initially handed the gubernatorial election to the wrong candidate. 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. ... 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. [92] ...[Mark] Kelley [general manager of Election Systems & 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. ...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.
October 2003	Diebold GEMS – Election Management Systems	**Alameda County, California.** A bug in the election management system caused tally errors when the election results from multiple machines were merged. ... the cause is a problem with the GEMS 1.18.18 program.[93] The only solution is to use a new version of the software, version 1.18.19, if and when it is certified.

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[92] **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.

[93] **Report of Assurances to Alameda County.** April 26, 2004. By Diebold Election Systems, Inc. Pages 5,6. http://www.truevotemd.org/ebold_rpt_alameda.pdf.

Date	Equipment	Place/Description
March 2004	ES&S Unity EMS	**Bexar County, Texas.** Misprogramming causes the Unity software to balk at accumulating votes from the optical scan machines used to count absentee ballots. [94] Tabulation of the Bexar County votes was delayed for about 1 1/2 hours, beginning about 8 p.m. …"They have big problems," said Nick Peña, a poll watcher for District 28 U.S. Rep. Ciro Rodriguez, D-San Antonio. "They look very worried. "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. … 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. 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.
March 2004	Diebold GEMS	**San Diego County, California.** The tabulation software switched 2,747 Democratic presidential primary votes for U.S. Sen. John Kerry to U.S. Rep. Dick Gephardt. [95]

[94] **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

[95] **Diebold reports multiple problems: Registrar wants reason for e-voting.** TriValley Herald. April 13, 2004. By Ian Hoffman, Staff Writer.
   Archive: http://www.votersunite.org/article.asp?id=2390

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
July 2004	ES&S Unity EMS	**Miami-Dade County, Florida.** In response to public records requests, more and more bugs surface in the ES&S software used across the United States.[96] In a June 3 letter to ES&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&S to resolve these issues "expeditiously:" ♦ 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. ♦ The optical scanners used to read absentee ballots have problems when information is merged from the three machines the county uses. ♦ 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. ES&S responded with: **Fix it yourself** by changing your election procedures to work around the bugs. ES&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.
August 2004	Sequoia EMS	**Hillsborough County, Florida.** The computer indexing system malfunctioned. [97] After the polls closed Aug. 31, [County Registrar Buddy] Johnson's computer servers mysteriously slowed to a snail's pace, and the vote was not totally counted until 5:10 a.m. the day after the election. After a diagnosis by Sequoia Voting Systems, the vendor that sold Hillsborough its $12-million package of touch screen voting machines, Johnson announced that a computer indexing system had malfunctioned, causing the server to repeatedly search through its entire data base before recording any single vote. A few days later, Johnson said he wasn't sure why the computer indexing hadn't worked properly but declared it "now fixed."

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

[97] **245 Hillsborough primary votes go uncounted.** St. Petersburg Times. September 18, 2004. By Jeff Testerman, Times Staff Writer. http://www.sptimes.com/2004/09/18/Hillsborough/245_Hillsborough_prim.shtml

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
October 2004	Sequoia EMS	**Bernalillo County, New Mexico.** Tally software has added false votes to several elections in the last two years. [98] The unresolved issue of phantom votes in Bernalillo County apparently dates back several elections over two years. County Clerk Mary Herrera acknowledged Monday that bogus votes have appeared in at least three elections. She says the problem began when the county purchased new election software for the vote tally machines it uses on election night. **In one case, nearly four thousand phantom votes were added to just one race.** However, the clerk says her vote-counting experts have always found the phantom votes before they were added to the final tally. In June 2004, Herrera sent an emergency request for help to Secretary of State Rebecca Vigil-Giron. Her office says it will help Bernalillo county fix the problem after this year's election. Vendors have been blaming it on communications, but in spite of efforts to fix the problem, Herrera still does not know what's causing it. [99]
November 2004	Diebold EMS	**Gaston County, North Carolina.** The 1209 votes for the Dallas precinct were deleted from the totals.[100] Each precinct transmits results to the elections office by modem after the polls close. When equipment is returned between Wednesday and Friday, the results recorded on it are compared with the results transmitted by modem. There was no data for the Dallas precinct in the database. Office records from election night, kept by a staff member, showed that information was received, Page said. She believes the computer system recorded a successful transmission without receiving any data.

[98] **County clerk say phantom votes won't be a problem.** KRQE Albuquerque. October 26, 2004.
http://www.krqe.com/expanded3.asp?RECORD_KEY%5BLargeHeadline%5D=ID&ID%5BLargeHeadline%5D=7425

[99] Video is here: http://www.krqe.com/video/expanded3.asp?RECORD_KEY[Video3]=ID&ID%5BVideo3%5D=1054

[100] **Latest Gaston flub: 1 precinct omitted.** Charlotte Observer. November 13, 2004. Binyamin Appelbaum.
Archive: http://www.votersunite.org/article.asp?id=3820

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description

November 2004	ES&S Unity EMS	**Grays Harbor, Washington.** Elections officials started recounting about 28,000 ballots on Tuesday after the ES&S Unity reporting system showed too many votes.[101]
		
		    [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.
		
		    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.
		
		The recount changed the outcome of the Governor's race in Grays Harbor County.
		
		VotersUnite contacted Mr. Spatz and mentioned that ES&S optical scanners had double-counted ballots in other states during the November election. He was concerned because ES&S Unity Election Management software is supposed to prevent cartridges from being downloaded twice.

November 2004	ES&S Unity EMS (2.2)	**Guilford County, North Carolina.** ES&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.[102]
		
		    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.
		
		    "So it just threw some of (the votes) away," said Guilford County elections director George Gilbert.
		
		    ... 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.
		
		    The Guilford totals didn't change President Bush's win in the state, but did shift the vote total by 22,000.
		
		In a letter to Guilford County, Ken Carbullido, Vice President of ES&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. [103]
		
		In the letter, Mr. Carbullido admitted ES&S knew about the problem but had not advised the county.

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[101] **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. Archive: http://www.votersunite.org/article.asp?id=3876

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

[103] http://www.votersunite.org/info/GuilfordESS.pdf

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	ES&S EMS	**LaPorte County, Indiana.** A software flaw caused every precinct to report 300 registered voters. The county is waiting to get a patch from ES&S. The problem lies in the column that is supposed to reflect the number of registered voters per precinct. The column erroneously showed that every precinct had a total of 300 registered voters.[104]
November 2004	ES&S Unity EMS (2.2)	**Orange County, Florida.** Among the election equipment foul-ups in Florida, vote tabulating software reached its 32,767 capacity and began counting backwards. [105] 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. 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. 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. ... 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.
November 2004	ES&S EMS	**San Francisco County, California.** The ES&S software failed to accurately count votes in the city's new ranked-choice voting system. The software converts optical scans of ballot results into data that the computer system uses to calculate winners. The conversion software shutdown when the amount of data entering the system had exceeded a "safeguard" limit set by the vendor.[106] The safeguard was to prevent the system from exceeding its capacity. But after the breakdown, ESS determined the limitation was no longer necessary and received permission from the California Secretary of State to shut down the mechanism and restart the counting process, Ken Fields, spokesman for ESS, said.

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[104] **Voter turnout still not known.** Herald Argus. November 4, 2004. By Kori Kamradt. Archive: http://www.votersunite.org/article.asp?id=3777

[105] **Distrust fuels doubts on votes: Orange's Web site posted wrong totals.** Orlando Sentinel. November 12, 2004. By David Damron, Sentinel Staff Writer. Archive: http://www.votersunite.org/article.asp?id=3803

[106] **San Francisco Finds Fix For Election Day Tech Snafu.** InternetWeek.com. November 5, 2004. By Antone Gonsalves, TechWeb News. http://www.informationweek.com/news/showArticle.jhtml?articleID=52200321. Archive: http://www.votersunite.org/article.asp?id=4745

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
March 2006	Sequoia Insight Optical Scanner & EMS	**Cook County, Illinois.** Contract revocation considered because of problems in March 21 Primary.[107] Thousands of votes in more than 50 precincts went uncounted where Sequoia machines were in use. Tabulation problems were cited by officials. "The administration of this election was a train wreck," [Commissioner Forrest Claypool] said. Thousands of votes in more than 500 precincts went uncounted Tuesday night in the county and in Chicago, which also uses the high-tech system provided by Sequoia Voting Systems. City and county election boards still hadn't tallied up all of the votes by Wednesday night. The system uses optical scanners and touch-screen voting machines. Some of the delay was blamed on the difficulty of combining results from the two machines. Some polling places were unable to transmit results to election headquarters. There were also paper ballots that wouldn't scan properly and had to be taken downtown. Minor breakdowns of some equipment exacerbated the problems, but Sequoia officials insisted Wednesday that the system "performed very well, overall."
March 2006	ES&S M-100, AutoMARK	**La Salle County, Illinois.** In the first election held with the county's new AutoMARK units, an ES&S Technician's error was blamed for incorrect totals delivered the night of an election held March 21, 2006.[108] County Clerk said that all votes were tabulated in the computer system; however, incorrect numbers were being printed and posted on the web site because of a technician's error, and in an attempt to correct his mistake, he created a problem with eight additional precincts, in which the votes were being doubled. The problem took several hours to fix.
March 2006	Hart InterCivic EMS	**Tarrant County, Texas.** Computer programming errors added 100,000 votes to the final tallies in both primaries, leading to multiple candidate requests for recounts. [109] About half a dozen candidates in both parties have requested free recounts of primary election votes, — but state and local officials say the politicians will first have to plunk down deposits of as much as $4,500 for the do-over. This comes despite promises last week that free recounts would be available in Tarrant County, where a computer programming error counted some votes multiple times and **boosted the final tally in both primaries by as much as 100,000 votes.**

[107] **Vote snafu: Some blame new equipment.** Chicago Sun-Times. Mar 23, 2006. by Steve Patterson.
http://www.suntimes.com/output/elect/cst-nws-machine23.html

[108] **Technician causes glitch in printed results.** The Times, March 22, 2006 by Tammie Sloup. Story archived at
http://mywebtimes.com/ottnews/archives/ottawa/sections.cgi?prcss=display&id=256964

[109] **Primary Election Outcomes challenged** Star –Telegram, March 15, 2006 by Anna M. Tinsley. http://www.dfw.com/mld/dfw/14108253.htm

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2006	ES&S Optical Scanner & EMS	**Mahoning County, Ohio**. May 2 primary elections encountered many problems, including malfunctioning equipment.[110] The county's central voting system machine didn't recognize the software used on the optical scanners used to count absentee paper ballots. Also, some of the paper absentee ballots provided by Olfield Graphics in Austintown weren't cut correctly and several of them couldn't initially be read by the optical scanners, McCabe said. A process that typically takes two hours took five hours and 15 minutes, McCabe said.
May 2006	ES&S Optech Eagles, Unity EMS	**Pulaski County, Arkansas.** ES&S election software malfunctions, and ES&S programmed the ballots incorrectly. [111] [County attorney Karla] Burnette said the problems were two-fold, resulting from a malfunctioning opening and closing system of the electronic voting machines and mistakes in programming. "The machines were programmed by precincts instead of polling sites. We have several precincts that go to the same polling site," Burnette said. "The system did not know where to put those votes. The software couldn't recognize those votes." Optical scan machines, referred to by election officials as "Eagles," also malfunctioned because of malfunctioning Unity Software for the iVotronic electronic voting machines, supplied by ES&S.
November 2006	ES&S M100 Optical Scanner & EMS	**Flathead County, Montana.** Optical scanner memory cartridges read by the computers counted all votes for just one candidate.[112] County Election Director Monica Eisenzimer says she felt more comfortable using the printouts to count the votes anyway, "especially with all the speculation about the machines."
November 2007	Hart InterCivic eScan	**Hamilton County, Ohio.** Vote data from the eScan optical scanners was read incorrectly when it was uploaded to the central tabulator.[113] Tim Burke, chairman of the Hamilton County Board of Elections, said that there were problems when some of the memory chips from the vote-tallying machines at polling places got downtown to the board's offices on Broadway. When the chips were fed into the machines at the board of elections, they were giving false readings, Burke said.

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[110] **Election problems fuel dispute** The Vindicator, May 23, 2006 by David Skolnick.
  Archive: http://www.vindy.com/content/local_regional/292377332576076.php

[111] **County election woes blamed on company.** Jacksonville Patriot. May 31, 2006. By Toni Walthall, Editor.
  Archive: http://www.votersunite.org/article.asp?id=6594

[112] **Voting Technology: Communication breakdown.** Missoula Independent, November 16, 2006. by Paul Peters.
  Archive: http://www.votersunite.org/article.asp?id=6882

[113] **Slow vote count meant long night for Hamilton County.** The Enquirer, November 6, 2007. By Howard Wilkinson.
  Archive: http://www.votersunite.org/article.asp?id=7303

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
February 2008	ES&S M100 Precinct Scanner & EMS	**Cochise County, Arizona.** As the county accumulated totals from the precincts, a computer error kept adding the results for five polling places every time new figures were added.[114] The error got worse when the cumulative error went through five updates. It was then realized the total number of ballots cast according to the wrong report was more than the people registered in the county, [Cochise County Election Office Tom] Schelling said.
April 2008	Diebold EMS	**Butler County, Ohio.** Election officials discovered a "serious problem in the GEMS program provided by Premier Elections Solutions." On the night of the March 4 election, even though the system reported that all memory cards had been uploaded properly, one of the memory cards had not been. The system did not report the error, and the officials found it accidentally while examining the database for an unrelated reason. In their subsequent complaint letter to Diebold, they pointed out: [115] "A situation of this nature could impact any election. It may appear that every vote has been counted when cards indicate they are being properly uploaded, when in fact votes cast on a memory card(s) are not tabulated in the results." **A state investigation found that 11 Ohio counties had experience the same error:** Belmont, Butler, Cuyahoga, Green, Guernsey, Henry, Jefferson, Lucas, Miami, Montgomery, and Stark. **[116]**
May 2008	ES&S EMS	**Mecklenburg County, North Carolina.** About 2,400 absentee ballots were counted twice by the ES&S Unity tabulation system.[117] Alan Teitleman noticed the problems in Mecklenburg Co. when the absentee ballot count for every candidate ended with an even number. That's 83 candidates, all ending even. He brought the statistical anomaly to Dickerson's attention.

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[114] **Computer glitch causes hiccup in Cochise County tally.** Wick News Service. February 7, 2008. By Bill Hess. http://www.douglasdispatch.com/articles/2008/02/07/news/doc47ab6bc4d0b70550988123.txt. Archive: http://www.votersunite.org/article.asp?id=7520

[115] **Butler County missed 105 votes.** Cincinnatti Enquirer. April 8, 2008. By Gregory Korte. Archive: http://www.votersunite.org/article.asp?id=7628

[116] Ohio Secretary of State. Press Release. August 6, 2008. http://www.sos.state.oh.us/SOS/PressReleases/2008%20Press%20Releases/2008-0806.aspx

[117] **Mecklenburg, Wake find vote flaws.** News 14 Carolina. May 9, 2009. By Shawn Flynn. http://news14.com/content/top_stories/595595/mecklenburg--wake-find-vote-flaws/Default.aspx. Archive: http://www.votersunite.org/article.asp?id=7703

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2008	ES&S M100 Scanner & EMS	**Onslow County, North Carolina.** About 4,000 optical scan ballots from early voting -- apparently uploaded correctly -- weren't counted by the tabulation software. A state representative noticed the low number of votes from some one-stop voting sites and the county investigated.[118] [Rose Whitehurst, director of the Onslow County Board of Elections] said what happened was that when she uploaded the votes, she thought the votes were counted. "When we started looking over the report, we found that the votes didn't all go into the software," she said. "We started doing an audit and ran through the information (and found that) both one-stops weren't counted."
May 2008	ES&S EMS	**Wake County, North Carolina.** About 37,000 optical scan ballots were counted twice by the ES&S Unity tabulation system.[119] In Wake County, early and absentee ballots were counted as part of the individual voters precincts and again as a whole. "So in essence, those voters were recorded double," said Cherie Poucher of the Wake Co. Board of Elections.
June 2008	Sequoia EMS (Insight and 400C)	**Palm Beach County, Florida.** About 700 votes for three precincts (14% of the total votes) weren't counted on election night after Tuesday's special city commission election. According to elections office spokeswoman Kathy Adams, the cartridges from those precincts hadn't uploaded properly to the central tabulator.[120] She said the office didn't know why the cartridges weren't read properly the first time. She said it was possible that one reader wasn't working properly and that all three cartridges were read by that reader.

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[118] **Thousands of votes missed in Tuesday tallies.** Jacksonville Daily News. May 9, 2008. By Heather Gale. http://www.jdnews.com/articles/votes-56535-board-onslow.html. Archive: http://www.votersunite.org/article.asp?id=7696

[119] **Mecklenburg, Wake find vote flaws.** News 14 Carolina. May 9, 2009. By Shawn Flynn. http://news14.com/content/top_stories/595595/mecklenburg--wake-find-vote-flaws/Default.aspx. Archive: http://www.votersunite.org/article.asp?id=7703

[120] **Nearly 700 West Palm votes not tallied election night.** Palm Beach Post. June 28, 2008. By Thomas R. Collins. http://www.palmbeachpost.com/localnews/content/local_news/epaper/2008/06/27/0627wpbelex.html. Archive: http://www.votersunite.org/article.asp?id=7772

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
June 2008	Sequoia EMS	**San Bernadino County, California.** The reporting software fails to include precincts that are all vote-by-mail. Sequoia has known about the defect for at least a year, but has not yet corrected it. Riverside County's registrar also has known about the problem and has developed workarounds to deal with it.[121] [San Bernadino County Registrar Kari] Verjil said San Bernardino County's voting machines read the votes and precinct numbers on ballots cast by voters at polling places, but do not read the precinct numbers on mail-in ballots.
November 2008	ES&S M100 Precinct Scanners & EMS	**Craven County, North Carolina.** A memory card error caused only part of the main one-stop (early voting) ballots to be uploaded from one site. The county uses touch screens and M100 scanners. Revised numbers raise the turnout from 60% to 65% and may change the outcome of a State Representative race. An error in the reporting software also incorrectly categorized some ballots as absentee.[122] Officials say that coding errors, made by ES&S and distributed by Print Elect, caused the software to read the data incorrectly.[123] Four ballot styles reflecting the district in which voters of particular precinct could participate and the "Geo-codes" were not entered correctly and produced reporting problems.
November 2008	ES&S EMS	**Forsyth County, North Carolina.** An error occurred while uploading data from Precincts 601 and 604, causing incomplete vote data to be included in the initial results. The article describe the error:[124] [Rob Coffman, Forsyth County's director of elections,] said that the two precincts did correctly record the votes cast for each candidate, but when the results were fed into a computer that tallies all the returns, a mistake caused the software to omit results for the 74th N.C. House District in those two precincts. That, in turn, caused the vote totals in some other races to be incorrect. The corrected totals for the two precincts will result in slight changes in the totals of a number of other political contests.

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[121] **Software glitch led to precinct, vote uncertainty in SB County.** The Press Enterprise. June 5, 2008. By Darrell R. Santschi and Cindy Martinez Rhodes. http://www.pe.com/localnews/inland/stories/PE_News_Local_N_glitch05.41ce262.html. Archive: http://www.votersunite.org/article.asp?id=7733

[122] **Revised numbers add to turnout in Craven election.** ENC Today.com. November 13, 2008. by Sue Book. http://www.enctoday.com/news/votes-42894-nbsj-election-county.html. Archive: http://www.votersunite.org/article.asp?id=8219

[123] **Canvass in Craven won't be complete until Monday.** ENC Today.com. November 14, 2008. by Sue Book. http://www.enctoday.com/news/elections-42912-nbsj-election-board.html. Archive: http://www.votersunite.org/article.asp?id=8222

[124] **Gap in judicial contest narrows. Vote-count correction may lead to a recount.** Winston-Salem Journal. November 8, 2008. By Wesley Young. http://www2.journalnow.com/content/2008/nov/08/gap-in-judicial-contest-narrows/. Archive: http://www.votersunite.org/article.asp?id=8226

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2008	Diebold Optical Scanner & EMS	**Hillsborough County, Florida.** Elections officials had to break up early voting results into smaller pieces to prevent crashing the computer system, and about 150 optical scanners had trouble transmitting results and had to be manually taken to the elections office.[125] Elections workers began re-entering nearly 80,000 two-page ballots into the machines Thursday morning. It's expected to take at least ten hours to complete, then another two hours to upload the results into the system. [County Supervisor of Elections]Johnson blames Premier, the company that makes the optical scan machines. But Premier is blaming the elections office for trying to upload too many votes at once, and for mixing early voting and Election Day ballots.[126]
November 2008	Diebold EMS	**Manatee County, Florida.** When officials attempted to upload the vote data from memory cards into the central tabulator, they got an error message that prevented them from tallying the votes. About 2/3 of the county's ballots are affected. Officials say this has not happened before.[127] A simple change in one Manatee County race, where a candidate dropped out last week, caused the Premier software program known as GEMS to lock up. That prevented the counting of 46,000 ballots on Tuesday night, Supervisor of Elections Bob Sweat said.[128]
November 2008	ES&S Optical Scanner	**Polk County, North Carolina.** Results for the County Board of Elections flip flop twice as the county struggles with a malfunction in the computer reporting system. Rebooting seems to help, but then results flip again. Then winners are declared. County officials speculate that some of the precincts were counted twice by the software.[129]

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[125] **Voting Glitches Mar Election.** Tampa Bay Online. November 5, 2008. By Christian M. Wade. http://www2.tbo.com/content/2008/nov/05/na-voting-glitches-mar-election/news-politics/. Archive: http://www.votersunite.org/article.asp?id=8149

[126] **Governor asked to intervene in Hillsborough elections.** My Fox Tampa Bay. November 6, 2008. Archive: http://www.votersunite.org/article.asp?id=8184

[127] **Glitch prevents Manatee County from issuing final election results.** Herald Tribune. November 4, 2008. By Christopher O'Donnell. http://www.heraldtribune.com/article/20081104/BREAKING/811040175?Title=Glitch_prevents_Manatee_County_from_issuing_final_election_results. Archive: http://www.votersunite.org/article.asp?id=8142

[128] **Vote software is under fire.** Herald Tribune. November 6, 2008. By Christopher O'Donnell & Todd Ruger. http://www.heraldtribune.com/article/20081106/ARTICLE/811060374?Title=Vote_software_is_under_fire. Archive: http://www.votersunite.org/article.asp?id=8177

[129] **Revised results give Democrats sweep in county board race.** Tryon Daily Bulletin. November 6, 2008. by Chris Dailey. http://tryondailybulletin.com/index.php?option=com_content&task=view&id=1370&Itemid=192. Archive: http://www.votersunite.org/article.asp?id=8187

Date	Equipment	Place/Description
December 2008	Diebold EMS	**Humboldt County, California.** The election management system (GEMS 1.18.19) deleted the vote data from the first precinct uploaded to the server -- a precinct with 197 ballots. Diebold (Premier) has known about this problem since 2004. County Registrar of Voters Carolyn Crnich explained what Diebold told her. [130] [S]ometimes when a deck is deleted from the machine due to normal complications, the software also deletes the Deck Zero, which in this case was the vote-by-mail ballots from Precinct 1E-45. The error was discovered by citizens double-checking the ballot totals through the "transparency project" instituted by Crnich.

[130] **Software glitch yields inaccurate election results.** The Times-Standard. December 5, 2008. by Thadeus Greenson. http://www.times-standard.com:80/localnews/ci_11145349. Archive: http://www.votersunite.org/article.asp?id=8255

Ballot-Scanner Voting System Failures in the News — A Partial List

Memory Card Malfunctions

Votes tabulated by scanners are stored on memory cards inside the scanners. The data from these memory cards is uploaded to the central tabulator where it is aggregated.

In most of the 22 memory card failures reported in this section, the scanned votes could not be retrieved or the data was incorrect. The ballots had to be rescanned using a new memory card, or precinct tallies from scanner printouts were entered into the central computer by hand.

Other memory card problems were: card readers malfunctions, cards programmed for the wrong precinct, cards set up as test cards which didn't store vote data. In one case, the memory card became full and the scanner then rejected all ballots.

Date	Equipment	Place/Description
November 2004	Diebold AccuVote OS	**Ripley County, Indiana.** During testing, County Clerk Ginger Bradford discovered an error with the optical scan memory cards.[131] The memory cards that count the votes in optical scanners had the wrong precinct labels, so the cards were sent back to the company, Bradford said. "They reprogrammed the cards when they got them back, so it sounds maybe like it was a programming error," Bradford said.
November 2004	Diebold AccuVote OS	**Seminole County, Florida.** Memory cards failed in three machines, erasing votes cast in early voting. The problem was discovered when poll workers tried to send voting results via modem to the main elections office.[132]
November 2004	Diebold AccuVote OS	**Volusia County, Florida.** Memory cards failed in three machines, erasing 13,244 votes cast in early voting. Officials had to re-feed all the ballots into a new machine.[133] [T]he county had the memory cards inspected by Diebold this summer in preparation for the busy election season, said Charlene Gagnier, director of outreach for Volusia's election department. Ion Sancho, the elections supervisor in Leon County, said officials with Diebold told him that the new, higher-capacity memory cards tend to have more glitches than older cards. "It doesn't occur every time," Sancho said. "The most difficult problem to solve with any piece of technology is an intermittent anomaly."

[131] **3 more counties report errors.** Palladium Item. November 16, 2004. by Pam Tharp. Archive: http://www.votersunite.org/article.asp?id=3862.

[132] **Computer glitches slow Volusia results.** Orlando Sentinel. November 4, 2004. By Kevin P. Connolly, Staff Writer. Archive: http://www.votersunite.org/article.asp?id=3694

[133] **Computer glitches slow Volusia results.** Orlando Sentinel. November 4, 2004. By Kevin P. Connolly, Staff Writer. Archive: http://www.votersunite.org/article.asp?id=3694

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
March 2006	ES&S Optical Scanner	**Summit County, Ohio.** County officials are threatening legal action against ES&S if the company doesn't cooperate more with the county.[134] Complaining that memory cards for the county's Optical-Scan voting system have been defective in several shipments, and several new problems the county is having with ES&S, officials said ES&S' attitude has become uncooperative, like "pulling teeth."
March 2006	ES&S Optical Scanner	**Summit County, Ohio.** Memory Card problems in Akron cited as same as in North Carolina.[135] 1,000 memory cards supplied by ES&S were defective. ES&S blamed the problem on bad batteries in about 1/3 of the cards. Summit County Board of Elections director Bryan Williams described the problem as "read-back errors, not a battery issue." For 2/3 of shipment in question. ES&S claims batteries should last between 3 and 5 years and blamed faulty cards on a subcontractor. Officials say they will test all replacements.
April 2006	ES&S Optical Scanner	**Summit County, Ohio.** New machines are being deployed for May 2 elections and officials are concerned about memory cards working. Alternative plans in place and county officials will conduct hand counts in selected precincts to compare against machine counts.[136] Failures are expected and contingency plans are in place. ES&S Account Manager Jerry Hayek told Election Board Commissioners to expect an error rate in all areas is 1%. ES&S is paying $350 a day to 19 U of Akron students to go through planning and work all election day to help with problems. ES&S will provide 48 spare memory cards.
November 2006	Diebold AccuVote OS	**Anchorage, Alaska.** Memory cards malfunctioned.[137] A handful of memory cards malfunctioned and had to be replaced, [Division of Elections director Whitney] Brewster said, but that happens every election.
November 2006	Hart InterCivic eScan	**Lancaster County, Pennsylvania.** A third of the county's 232 polling stations experienced malfunctions on the Hart InterCivic eScan ballot scanners. In many cases, the memory cards being used were test cards, not set up to accept election results.[138]

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[134] **Election officials threaten legal action against supplier** Akron Beacon Journal, March 22, 2006 by Lisa Abraham. Story archived at
http://www.ohio.com/mld/ohio/living/community/14157502.htm

[135] **Voting system's troubles spread** Akron Beacon Journal, March 16, 2006 by Lisa A. Abraham. Story archived at
http://www.ohio.com/mld/ohio/news/14111596.htm

[136] **Election officials concerned about new machines working** The Akron Beacon Journal, April 25, 2006 by Lisa A. Abraham.
http://www.ohio.com/mld/beaconjournal/14426268.htm

[137] **Elections head reports few glitches.** Anchorage Daily News. November 9, 2006, The Associated Press.
Archive: http://www.votersunite.org/article.asp?id=6833

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	Diebold AccuVote OS	**Mendocino County, California.** Diebold memory cards were corrupted, losing votes counted on optical scanners. Ballots will be recounted in the canvass process. [139]
June 2007	Hart InterCivic eScan Precinct Scanner	**Bedford County, Pennsylvania.** Memory cards became full and scanners refused to accept any more ballots. [140] [Peg Koenig, director of elections in Bedford County] said the Northern Bedford County School District had a massive write-in campaign that was much larger than expected. She said the memory cards in the e-scan voting machines became so full that the machines spit the ballots out.
November 2007	Diebold memory cards	**Florida.** Diebold memory cards used in precinct optical scanners fail at rates as high as 9.2% and 9.4% in some counties. Failures have caused vote losses in the past. Diebold will inspect all the machines in Florida, but only those in Florida if they do not receive complaints from other states.[141]
January 2008	Diebold AccuVote OS	**Hanover, Exeter, Nashua, and Manchester Counties, New Hampshire.** Problems with the Premier (Diebold) optical scan machines reported by the officials in all four counties. Break down of the visor that guides write-in votes into the right bin, and memory card failures.[142]
January 2008	Diebold AccuVote OSX	**Sarasota County, Florida.** Six optical scanners quit working and had to be replaced. Some machines had problems with the memory card, while others had a faulty scanner.[143] "They were all tested before and for various reasons they just went bad," said Kathy Dent, Sarasota County supervisor of elections.

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[138] **County to investigate voting problems: Troublesome machines hindered election.** Intelligencer Journal. November 9, 2006. By Dave Pidgeon.
Archive: http://www.votersunite.org/article.asp?id=6798

[139] **County clerk reports memory card problem.** The Daily Journal. November 10, 2006. By Katie Mintz. Archive: http://www.votersunite.org/article.asp?id=6845

[140] **Bedford County Republican Primary Votes To Be Recounted.** WJAC-TV.com. June 19, 2007. http://www.wjactv.com/news/13530242/detail.html.
Archive: http://www.votersunite.org/article.asp?id=7147

[141] **Survey contradicts vote machine firm's failure rate claim.** Daytona Beach News-Journal. November 3, 2007. By M.C. Moewe.
Archive: http://www.votersunite.org/article.asp?id=7284

[142] **Diebold Voting Machine Failures Found Across State During New Hampshire Primary.** BradBlog.com. January 12, 2008. By Brad Friedman.
http://www.bradblog.com/?p=5553

[143] **AT THE POLLS: Problems with voting machines; reaction mixed on tax amendment.** Herald Tribune. January 29, 2009. Staff Reports.
http://www.heraldtribune.com/article/20080129/BREAKING/63466273/-1/newssitemap. Archive: http://www.votersunite.org/article.asp?id=7445

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
March 2008	ES&S M100 Precinct Scanner	**New Mexico.** Problem-prone memory cards used in voting machines across New Mexico are being recalled to make certain they're working properly in preparation for the June primary election.[144] The cards hold ballot information and are necessary for vote tabulators to operate. However, a number of county clerks have reported card failures and they have been forced to use backup cards to keep voting machines in service during elections. Voters feed their paper ballots into the tabulators at polling places. ES&S is New Mexico's sole supplier of the voting machines and their memory cards.
May 2008	Diebold AccuVote OS	**New Milford, Connecticut.** A memory card malfunctioned in New Milford. The nearest replacement card was three hours away, so the 426 optical scan ballots were hand counted.[145]
June 2008	ES&S EMS (M100)	**Curry County, New Mexico.** Memory card problems caused results to be reported incorrectly. After discovering suspect results, software technicians evaluated the device that reads memory cards.[146] A software glitch, [County Election Manager Coni Jo] Lyman said, caused precinct totals in an early voting location to be counted more than once. The problem with a memory card used to store results was difficult to identify, Lyman said, because not every precinct total doubled. "One of the early voting locations, it has put sporadic precincts in twice," Lyman said. "It would accept results, but said it didn't scan. You would re-scan, and it would accept that too."
November 2008	Diebold AccuVote OS	**Cumberland County, Maine.** A memory card malfunctioned in one of the three tabulation machines.[147] Scarborough processed 6,000 absentee ballots by Monday evening. Because election officials were unsure which machines had processed the absentee ballots, they decided to recount all of the ballots to be safe.
November 2008	Diebold AccuVote OS	**Miami County, Ohio.** A memory card failed, halting the scanning of ballots and leaving the officials with 10 boxes of ballots that had to be rescanned.[148] Extra scanners from Premier Elections office in Montgomery County had to be brought in because those used to count this election's vote could not be used for another count until the election results are certified, elections Director Steve Quillen said.

[144] **New Mexico to check troubled voting equipment.** March 21, 2008. Associated Press. Archive: http://www.votersunite.org/article.asp?id=7610

[145] **Voting problems: Count every vote, but not by hand.** The News-Times, May 30, 2008. Archive: http://www.votersunite.org/article.asp?id=7727

[146] **Software glitch found, election results released.** Clovis News Journal. June 5, 2008. By Kevin Wilson. http://www.cnjonline.com/news/tuesday-28438-election-county.html. Archive: http://www.votersunite.org/article.asp?id=7736

[147] **Broken voting machine delays Scarborough results.** Keep Me Current. November 4, 2008. By Al Edwards. Archive: http://www.votersunite.org/article.asp?id=8145

[148] **Miami County set to recount 7,500 paper ballots.** Dayton Daily News. November 5, 2008. By Nancy Bowman, Staff Writer. http://www.daytondailynews.com/n/content/oh/story/news/local/2008/11/05/ddn110508miamiwoesweb.html. Archive: http://www.votersunite.org/article.asp?id=8153

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2008	Sequoia Optical Scanner	**Palm Beach County, Florida.** Problems with four memory cartridges from the optical scanners have prevented county election officials from posting complete unofficial results of Tuesday's race. The bad cartridges represent thousands of votes.[149] While tests were still being done, Assistant County Administrator Brad Merriman said it is likely the ballots themselves will be run through tabulating machines later today.
November 2008	ES&S M100 Optical Scanner	**Rockingham County, North Carolina.** The central tabulator failed to read the memory cards from the optical scanners at five of the six one-stop (early voting) sites.[150] "The system read the results from one of the sites, but it could not read the other five," said Tina Cardwell, deputy director of RCBOE. "We still don't know what caused the problem."
November 2008	Diebold AccuVote OS	**Scott County, Iowa.** Two memory card failures delayed the tabulation of results.[151] The memory cards held the results of 11,627 ballots cast in early voting. Election officials turned to printout tapes of the summary reports to be manually entered into the computer system, but the software required more detailed and time-consuming precinct-by-precinct information to be entered.
February 2009	Diebold AccuVote OS	**Walworth County, Wisconsin.** A problem with an optical scanner memory card caused a delay in election results reporting Tuesday night for the village of Darien. At the end of the day, another memory card problem prevented poll workers from sending in the results electronically.[152] Memory card problems are not common, but they happen often [enough] that the clerk's office staff know how to deal with them, [County Clerk Kim] Bushey said.

[149] **Palm Beach County vote results still incomplete.** Palm Beach Post. November 5, 2008. By Jane Musgrave, Staff Writer.
http://www.palmbeachpost.com/localnews/content/local_news/epaper/2008/11/05/1105votecount.html.
Archive: http://www.votersunite.org/article.asp?id=8164

[150] **Voting glitch in Rockingham County.** GoDanRiver.com. November 5, 2008. By Steve Lawson. Archive: http://www.votersunite.org/article.asp?id=8158

[151] **Computer glitch slows Scott County vote reporting.** Quad-City Times. November 6, 2008. By Kurt Allemeier.
Archive: http://www.votersunite.org/article.asp?id=8180

[152] **Voting machine problem causes delay.** GazetteXtra.com. February 18, 2009. By Gazette Staff. http://gazettextra.com/news/2009/feb/18/voting-machine-problem-causes-delay/. Archive: http://www.votersunite.org/article.asp?id=8320

Mark-Detection Failures

Loss of sensor calibration, inadequate maintenance, and other factors can affect the reading of votes marked on paper ballots. In the five malfunctions described in this section, scanners failed to read certain types of ink, light marks, and pencil lead.

Date	Equipment	Place/Description
November 2002	Sequoia Optech 4C-400	**Snohomish County, Washington.** Optical scanners failed to read 21,000 votes on absentee ballots because two lights that read the ballots were worn out. [153] When the lights wear out, Sequoia determined, they stop reading some types of ink. ... Snohomish County was the first jurisdiction to catch the problem, said Sheree Noell, a sales executive for Sequoia. The problem came to light this winter when the Snohomish County Republican Party pointed out that up to 25 percent fewer votes than voters were counted in some county legislative races. Two recounts showed more than 21,000 votes were missed in the county's legislative races alone, although none of the corrected counts changed the election results. The Snohomish County Auditor's Office called Sequoia to analyze the machines. How long have they been failing to detect votes? "It's just something that we've been observing, and we've been thinking **for a while** that the undercounts were getting too high," said Frauna Hoglund, chairwoman of the Snohomish County GOP.
March 2004	Sequoia Optech Optical Scan	**Napa County, California.** The machines failed to record votes marked with dye-based ink. The error was found during a manual recount used to verify accuracy. After counting 60 ballots, officials discovered that the number of votes didn't match the votes recorded by the machines. Prior to the election, a Sequoia technician ran test ballots through the machine to calibrate its reading sensitivity, but failed to test for gel ink. [154] [Napa Registrar of Voters John] Tuteur said the machine dropped 6,692 votes out of a total of 468,001 votes cast on the more than 13,000 absentee ballots. He added that there was no pattern to the dropped votes: They spanned federal, state and county races and affected various candidates and ballot measures.[155]

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[153] **County's voting troubles spur changes nationwide.** Seattle Times. January 29, 2003 by Emily Heffter, Times Snohomish County bureau. Archive: http://www.votersunite.org/article.asp?id=5276

[154] **Lost E-Votes Could Flip Napa Race.** Wired News; March 15, 2004; By Kim Zetter. http://www.wired.com/news/evote/0,2645,62655,00.html

[155] **E-Vote Snafu in California County.** Wired News; March 18, 2004; By Kim Zetter. http://www.wired.com/news/evote/0,2645,62721,00.html

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
April 2004	Diebold AccuVote OS	**Uxbridge, Massachusetts.** The machine failed to read 171 ballots because they were completed with the wrong kind of lead. Recount of the selectman race overturned the election. Because other candidates did not file for a recount in time, the other races cannot legally be recounted. Thus the other races remain in question. [156] The final decision was reached seven weeks after the election, after two hand recounts.
August 2004	ES&S Optech	**Muskegon, Michigan.** 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. The canvassing process, which compares the precinct reports to the results produced by the ballot-counting machines, found the same result. Tabler paid for a recount in all seven township precincts, and the result reversed the outcome.[157] 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. Overall, the recount revealed the existence of 39 more votes cast in the clerk's race than the original count did. ... 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.
November 2006	ES&S M100 Precinct Scanner	**Bannock County, Idaho.** The ballot scanners failed to recognize the ink in the pens recommended by ES&S. [158] Once the problem was discovered, the thousands of unread ballots were handed over to a resolution board, which included a Republican and a Democratic representative, Hurst said. They marked over each ink spot with a blue highlighter allowing the voter's original mark to show through and fed it through the machines again, Hurst said. One scanner broke down, leaving vote counters with just one machine to handle all the county's ballots.

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[156] **Town slated to hold second recount.** Milford Daily News; Wednesday, June 2, 2004; By Sara Withee, News Staff Writer
http://www.milforddailynews.com/localRegional/view.bg?articleid=49152

[157] **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

[158] **Dems critical of Idaho election officials. Trib.com.** November 9, 2006. By Rebecca Boone. Associated Press writer.
http://www.casperstartribune.net/articles/2006/11/09/news/regional/3e8994cf740c1eee87257220007c89e1.txt.
Archive: http://www.votersunite.org/article.asp?id=6856

Ballot-Scanner Voting System Failures in the News — A Partial List

Misprinted Ballots

The 13 items in this section describe the failures of vendors to print ballots properly. In most cases, the text was printed incorrectly and new ballots had to be printed. In some cases, coding on the ballots prevented the scanners from reading the ballots.

Date	Equipment	Place/Description
May 2004	ES&S Printer	**St. Francis County, Arkansas.** ES&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.[159]
October 2004	Sequoia Printer	**Adams County, Colorado.** Sequoia Voting Systems failed to print 13,000 absentee ballots ordered for Denver voters. [160] Residents wanted to know where their absentee ballots were.... Officials got suspicious, investigated, and discovered Monday that the California printer never printed the first batch of ballots, election commissioner Susan Rogers said. They are being printed now, though, and will be on their way to voters soon. "If people are leaving town or need one right away, they need to contact us," Rogers said. A phone call to Sequoia Voting Systems, the Oakland-based contractor that handles the printing, was not returned Tuesday afternoon.
October 2004	ES&S Printer	**Cass County, North Dakota.** ES&S printed 120,000 ballots with incorrect text. Both "yes" and "no" would approve a constitutional amendment banning gay marriage. Bar codes used for alignment were printed incorrectly, too. ES&S is responsible and will pay for reprinting.**[161]**
November 2005	ES&S M100 Precinct Scanner	**Sandusky County, Ohio.** Optical scanners used by the Sandusky County Board of Elections refused to accept hundreds of ballots because of a printing error.[162]

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[159] **Early voting runs into delays in 4 counties; suit filed in 1.** Arkansas Democrat-Gazette. May 7, 2004. By Stephen Deere.

[160] **Absentee ballots 'lost' at printer.** Rocky Mountain News. October 20, 2004. By Gabrielle Crist.
http://rockymountainnews.com/drmn/election/article/0,1299,DRMN_36_3267080,00.html

[161] **Ballots to get reprint.** The Forum. October 22, 2004. By Andrea Domaskin. Archive: http://www.votersunite.org/article.asp?id=3337

[162] **State plans to investigate voting chaos.** Toledo Blade. November 10, 2005. By Christopher D. Kirkpatrick.
http://toledoblade.com/apps/pbcs.dll/article?AID=/20051110/NEWS09/511100477. Archive: http://www.votersunite.org/article.asp?id=6308

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
April 2006	ES&S Printer	**Porter County, Indiana.** Some 80,000 primary election ballots bear faulty instructions and ES&S is replacing them.[163]
May 2006	ES&S Printer	**Carroll County, Arkansas.** ES&S provided incorrect ballot proofs. "It's like they threw a muffin in the air and let the pieces fall wherever," [Carroll County Election Commissioner Levi Phillips] said of the ballot errors. All justice of the peace and constable races were lumped together and there was a disregard for ballot positions in other races. The county voted to have the ballots printed by a local printer.
May 2006	ES&S Printer	**Clark County, Arkansas.** ES&S failed to print paper ballots on time, so local officials printed ballots on an office printer, and copied them onto standard paper which cannot be run through the scanners. [164] So ballots had to be counted by hand. Some ballots had to be printed on plain paper when ballots were not received in time for early voting. County Clerk Rhonda Cole said Election Systems and Software, the company responsible for programming the electronic voting machines, was supposed to have ballots printed in time for early voting. The county did not have ballots until late in the day on May 8, the first day of voting. The ballot information was e-mailed to Cole, who printed the ballots and made copies on an ordinary copy machine. Since the ballots are not coded individually, they cannot be counted through the scanning machine, [Karen] Wieman [coordinator of the Clark County Election Commission] said.
October 2006	ES&S Printer	**Summit County, Ohio.**[165] A printer certified by ES&S sent 22,000 misprinted ballots to the county. Already late, the delay made absentee voters wait even longer for their ballots. When the ballots arrived at the Summit County Board of Elections on Thursday, staff members discovered the second page was fraught with typographical errors. Words are running together and their letters are spaced incorrectly, making the ballot hard to read, said board Deputy Director Marijean Donofrio.

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[163] **The mystery oval** The NWI Times/ The Times April 25, 2006 by Matthew Van Dusen. Story archived at
http://www.thetimesonline.com/articles/2006/04/25/news/porter_county/6d4d52d58e4f7ad28625715a007b43a6.txt

[164] **Ballot problem could prolong count tonight** The Daily Siftings Herald, May 23, 2006 by Donna Hilton. Story archived at
http://www.siftingsherald.com/articles/2006/05/23/news/news1.txt

[165] **Summit absentee ballots delayed. Errors mean all 22,000 have to be printed again before they can be sent.** Beacon Journal. October 20, 2006. By Lisa A. Abraham, staff writer. Archive: http://www.votersunite.org/article.asp?id=6650

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	ES&S M650 Central Scanner	**Crawford County, Arkansas.** ES&S provided the ballot printer with the wrong format, and the software provided by ES&S for the scanners wouldn't read the ballots, which had to be counted by hand.[166] [County Clerk Patti] Hill and commission members said they have tried repeatedly to contact ES&S officials in the wake of the election and have so far not received any response to messages left on company answering machines.[167]
November 2006	Sequoia 400C	**Denver, Colorado.** Sequoia misprinted the barcodes that identify precincts on absentee ballots, so the county had to sort 70,000 ballots into the 23 different ballot styles. [168] Sequoia Voting Systems misprinted the bar codes and mailed out the absentee ballots directly to voters under a contract with Denver. The Denver Election Commission learned that the Sequoia scanner could not sort ballots when it tried a test count Oct. 19, election commission executive director John Gaydeski said Monday. Sequoia's vice president of communications, Michelle Shafer, did not return four calls and pages seeking comment. When they scanned the sorted ballots, one of the two scanners broke down and required repairs.
October 2008	Diebold AccuVote OS	**Gwinnett County, Georgia.** The outline of the oval on the absentee ballots is too thick and causes the scanners to tally incorrectly. The 10,000 returned ballots will be tallied by hand. The county is reprinting 19,000 ballots to send out for new requests.[169]
November 2008	ES&S M650 Central Count Scanner	**Carroll County, Arkansas.** A ballot–printing problem cause the scanner to be unable to tabulate the votes on absentee ballots.[170] According to Election Coordinator Cathy Ellis, an inked black block in the upper left hand corner of some paper ballots did not contain enough ink to satisfy the counting machine. When she called Election Systems and Software (ES&S), the company that provides the electronic voting machines, software, and printed paper ballots, she said they immediately suggested she try filling in the box with a black marker.

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[166] **Electronic voting off to rocky start.** Press Argus-Courier, November 13, 2006. by MELINDA W. BIGELOW.
http://www.pressargus.com/articles/2006/11/13/news/news01.txt. Archive: http://www.votersunite.org/article.asp?id=6859

[167] **Panel Seeks Recount On Ballots.** Times Record. November 14, 2006. By Rusty Garrett. http://www.swtimes.com/articles/2006/11/14/news/news01.txt.
Archive: http://www.votersunite.org/article.asp?id=6870

[168] **Big bar code backfire: Misprint blamed for days of hand-sorting absentee ballots.** Rocky Mountain News. November 14, 2006. By Ann Imse.
http://www.rockymountainnews.com/drmn/elections/article/0,2808,DRMN_24736_5142404,00.html.
Archive: http://www.votersunite.org/article.asp?id=6867

[169] **Early voting glitches in 2 counties in Ga., Tenn.** USA Today. October 24, 2008. Associated Press.
http://www.usatoday.com/news/politics/election2008/2008-10-24-early-voting-problems_N.htm. Archive: http://www.votersunite.org/article.asp?id=8042

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2008	ES&S Optical Scanner	**Madison County, Indiana.** The optical scanners were unable to count over half of the 12,000 early-voting ballots.[171] As it turns out, the coding on that portion of the early ballots was in the wrong position on the paper, tripping up the machines. An official from Omaha-based Election Systems & Software, which provided the counting system, seemed to acknowledge that the company had sent the county ballots that wouldn't work.

[170] **Williams, Link ousted in general election.** Carroll County News. November 6, 2008. by Anna Mathews. http://www.carrollconews.com/story/1475931.html. Archive: http://www.votersunite.org/article.asp?id=8183

[171] **EDITORIAL II: Ballot-counting problem should have been avoided.** The Herald Bulletin. November 4, 2004. http://www.theheraldbulletin.com/opinion/local_story_309220039.html?keyword=topstory. Archive: http://www.votersunite.org/article.asp?id=8146

Miscellaneous Operational Malfunctions

The 31 items in this section report a variety of operation malfunctions, including mechanical failures, ballot jams, automatic-feed failures, failure to connect by modem to the central tabulator, as well as many break downs that were not explained in the news story.

Date	Equipment	Place/Description
November 1998	ES&S M100 Optical Scanner	**Hawaii.** 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.[172] Tom Eschberger, a vice president of Election Systems & 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. He said the company did not know about the problem with the machine until after the Supreme Court-ordered recount, when **a second test on the same machine detected the malfunction**. He said the company is still investigating. The faulty ES&S machines forced that state's first-ever recount.[173] March 1999 update: From an official statement about the problems in the previous November election.[174] There was an obvious problem with seven voting units from Election Systems and Software -- out of 361 units used on Election Day. ♦ Five units had lens occlusion ♦ One unit had a defective cable ♦ One unit had a defective "read head"
November 1998	ES&S Optical Scanner	**Rhode Island.** [175] 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.

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[172] **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

[173] **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

[174] Statement by Marion Higa, State Auditor, and Chair of Elections Oversight Committee. March 15, 1999; www.state.hi.us/elections/review98.html

[175] **Who Counts The Votes?** By Gary Ashwill and Chris Kromm. http://www.southernstudies.org/reports/votingmachines-new.htm

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2004	ES&S M115 Optical Scanner	**Greene and Harrison Counties, Iowa.** Optical counties broke down in both counties.[176] Harrison County got its machine fixed shortly after midnight and resumed counting.
November 2004	ES&S Optical Scanner	**Marion County, Indiana.** One of the precinct scanners at an Indianapolis precinct broke down, but was repaired.[177] Elsewhere in Marion County, some optical scanners were not working. Still, officials said that did not prevent people from voting, as they were still able to fill out paper ballots that would be fed into the machines when they were operating.
November 2004	ES&S Optical Scanner	**Sacramento County, California.** Officials said they had sporadic trouble with the new scanning machines being used for the first time.[178] By late Tuesday, nine of the 712 machines used countywide had to be replaced because they didn't work, officials said.
November 2004	ES&S Optical Scanner	**Scott County, Iowa.** Optical scanners broke down.[179] Election officials there resorted to backup machines, which required workers to manually feed in about 23,000 ballots one by one.
November 2005	ES&S M100 Precinct Scanner & Unity EMS	**Clermont County, Ohio.** Perforations at the top of a new ballot design jammed the counters, and some ballots were not cut properly, so they had to be fed through the machines more than once.[180] New software also gave out inaccurate reports and had to be corrected. Several write-in candidates in more than half of the county's 200 precincts had to be counted by hand, slowing down the process, elections officials said.

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[176] **Broken vote-counting machines, MoveOn draw complaints in Iowa.** Des Moines Register. November 3, 2004. By Lynn Campbell.
   Archive: http://www.votersunite.org/article.asp?id=3825

[177] **Indiana voters turn out early despite rain.** wthr.com. November 2, 2004. Associated Press.
   http://www.wthr.com/Global/story.asp?S=2512161&nav=9TaiSfal. Archive: http://www.votersunite.org/article.asp?id=3629

[178] **Long lines, no ballots for some.** Sacramento Bee. November 3, 2004. By Will Evans and Christina Jewett, Bee Staff Writers.
   Archive: http://www.votersunite.org/article.asp?id=3883

[179] **Broken vote-counting machines, MoveOn draw complaints in Iowa.** Des Moines Register. November 3, 2004. By Lynn Campbell.
   Archive: http://www.votersunite.org/article.asp?id=3825

[180] **Multiple Voting Glitches Hold Up Clermont Results.** ChannelCincinnati. November 9, 2005. http://www.wlwt.com/politics/5286456/detail.html.
   Archive: http://www.votersunite.org/article.asp?id=6289

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2005	ES&S M650 Central Scanner	**Matagorda County, Texas.** The county's new ES&S optical scanner quit working after processing early ballots.[181] Out of the county's 12 election precincts, the early vote was the only one counted on the new machine before it quit working Tuesday night. The technician wasn't able to fix it, so ES&S had to fly a new one in for the county to certify and use.
November 2005	AVS WinScan	**Spotsylvania, Virginia.[182]** The ballot counting machines weren't working properly, and some ballots had to be counted by hand. A faulty memory pack on the system at Wilderness was rejecting ballots with even the slightest fray or fold in the paper, said Shirley Boggs, Spotsylvania's registrar.
March 2006	Sequoia Insight Optical Scanner	**Cook County, Illinois**. Equipment failed, long hours of waiting for voters, voters turned away.[183] The oversized optical-scan paper ballots jammed in some machines, while audio equipment for blind voters was not installed or did not work in other places… In suburban Cook County, election officials said about 10 optical scanners and 15 touch-screen machines were swapped out during the day … City officials still were counting their equipment failures but said at least two machines needed to be replaced and 30 to 40 needed repairs during the day. In suburban Summit, election officials confirmed that at least a dozen voters were turned away from the polls in one precinct. 414 Memory Cartridges Missing [184] At noon Wednesday, Chicago was missing 252 memory cartridges, 93 from machines that scanned in paper ballots and 159 from touch screens. County officials couldn't find 162 memory cartridges from suburban precincts--68 from optical-scanning machines and 94 for touch-screen balloting.

[181] **New voting machine malfunctions.** Bay City Tribune, November 9, 2005. By Erin Phillips. Archive: http://www.votersunite.org/article.asp?id=6296

[182] **Machine fails to tally vote in precinct.** Fredericksburg Free Lance-Star. November 10, 2005. By Meghann Cotter. http://fredericksburg.com/News/FLS/2005/112005/11102005/144632. Archive: http://www.votersunite.org/article.asp?id=6303

[183] **Machine Woes Slow Vote-Counting in Illinois**. Washington Post, March 22, 2006. Staff writers. http://www.washingtonpost.com/wp-dyn/content/article/2006/03/22/AR2006032202171.html

[184] **New machines, poor training slowed count**. Chicago Tribune. Mar 23, 2006. James Janega, John McCormick and David Kidwell, Tribune staff reporters http://www.chicagotribune.com/technology/chi-0603230212mar23,1,353880.story?page=1&coll=chi-technology-hed

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2006	ES&S Optical Scanner	**Benton County, Arkansas.** Optical scanners jammed and the precinct scanners, which are supposed to warn voters of overvotes so they can correct the error, didn't warn them.[185] [Jim McCarthy, Benton County election coordinator] reported that there were several voters who marked more than one box on their paper ballots for different races. He said in those cases election officials did not count the vote for that particular race if more than one box was filled.
November 2006	ES&S M100 Precinct Scanner	**Adams County, Pennsylvania.** Undefined problems with the ES&S M100 scanners were reported in several precincts. The county is investigating.[186]
November 2006	Sequoia Insight Scanner	**Alameda County, California.** Nearly 100 of the more than 800 Sequoia Insight ballot scanners jammed at polling sites.[187] As late as 4 p.m., some poll workers still were trying to wrest ballots free of the machines and get them working again, said Guy Ashley, spokesman for the Alameda County registrar. The problem was the flawed ballot printing.[188] The ballots featured a perforated strip at the top with a voter number that poll workers were to tear off and hand to the voter before inserting the rest of the ballot in the optical scanners. But the perforations were poor to non-existent, according to poll workers and county elections officials, leaving a ragged edge that jammed in the scanners.

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[185] **E Voting Zaps Quick Totals** The Morning News, May 23, 2006 (no byline/The Morning News and The Associated Press. Story archived at http://www.nwaonline.net/articles/2006/05/24/news/01azelection.txt
Election-day problems many The Benton County Daily Record, May 24, 2006 by Jennifer Turner. Story archived at http://nwanews.com/bcdr/News/35138/

[186] **Woman: Machine calls Santorum a democrat.** York Daily Record. November 7, 2006. By Brent Burkey.
Archive: http://www.votersunite.org/article.asp?id=6768

[187] **Some East Bay voters might have used wrong ballots.** Contra Costa Times. November 7, 2006. By Dogen Hannah, Karl Fischer and Chris Metinko.
Archive: http://www.votersunite.org/article.asp?id=6776
Absentee ballots flood offices. Inside Bay Area. November 8, 2006. By Ian Hoffman, Staff Writer. Archive: http://www.votersunite.org/article.asp?id=6784

[188] **Ballot scanners jam at Bay Area polling places.** Inside Bay Area. November 7, 2006. By Ian Hoffman, Staff Writer.
Archive: http://www.votersunite.org/article.asp?id=6778

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	ES&S M100 Precinct Scanner & M650 High-Speed Scanner	**Athens County, Ohio.**[189] Precinct scanners failed to scan ballots in at least two polling places, and the automatic feed on the absentee ballot scanner failed. The $45,000, high-speed, vote-counting machine for the absentee ballots had been tested, but when the staff finally started counting the absentee ballots Tuesday evening, it didn't work correctly, [Chair of the Athens County Board of Elections Susan] Gwinn said. The machine never actually broke down, she said, but it did not work as intended. The machine is supposed to be able to take a stack of ballots and count them quickly, she said. That did not work, so the staff members had to hand feed all 2,572 absentee ballots, Gwinn explained. The first ES&S technician was unable to repair the machine. In attempting to repair the machine, the second ES&S technician reset the counter and caused scanned votes to be left out of the unofficial count.
November 2006	ES&S M100 Precinct Scanner	**Calhoun County, Iowa.** ES&S M100 scanners locked up. Officials had to use a key to get them working again.[190]
November 2006	ES&S M100 Precinct Scanner	**Contra Costa County, California.** Eight or nine ballot scanners at various polling locations weren't reading ballots. Election workers were repairing or replacing the machines. Ballots were placed in a box to be scanned later.[191] One of the balky machines appeared to be at a polling location on Clinton Avenue in Richmond. Voter Ted Hudacko said the machine would not accept his ballot when he voted at about 9 a.m. Some malfunctions appeared to stem from the machines' difficulty handling the county's 19-inch-long ballots. Other malfunctions appeared to stem from internal electrical failures that knocked out machines' visual displays.
November 2006		**Kentucky.** Absentee ballot scanners across the state weren't working properly.[192] Counties reporting scanner problems were Bell, Bullitt, Breckinridge, Henry, LaRue, Livingston, Marion, Pulaski, Union, Warren, Wayne, Webster and Woodford, [Les Fugate, spokesman for the Kentucky secretary of state] said.

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[189] **Why did so much go wrong on Election Day in Athens County?** Athens News. November 13, 2006. By Nick Claussen.
Archive: http://www.votersunite.org/article.asp?id=6858

[190] **Voting snags are resolved quickly, Iowans report.** Des Moines Register. November 8, 2006. By Jennifer Jacobs. Archive:
http://www.votersunite.org/article.asp?id=6807

[191] **Some East Bay voters might have used wrong ballots.** Contra Costa Times. November 7, 2006. By Dogen Hannah, Karl Fischer and Chris Metinko.
Archive: http://www.votersunite.org/article.asp?id=6776

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
November 2006	ES&S M100 Precinct Scanner	**St. Louis County, Missouri.** Optical scanners broke down at some polling places. Voters deposited their ballots in a box to be counted later.[193]
November 2007	Hart InterCivic eScan	**Bedford County, Pennsylvania.** The eScan optical scanning machines were inoperable in every polling place in the county election-day morning. [194] Election commissioner Peg Koenig planned to visit all 40 precincts in the county to reprogram machines.
February 2008	ES&S M100 Precinct Scanner	**Lake County, Illinois.** An as-yet unidentified machine malfunction prevented optical scanners in 161 polling places across the county from connecting to the county's computers in Waukegan through the phone lines. An independent consultant will be employed to investigate.[195] The county clerk's office successfully relied on a backup plan to get votes from 161 polling places to the county government center in Waukegan.
February 2008	ES&S Optech Eagle Scanner	**Milwaukee, Wisconsin.** Optical scanners jammed and rejected ballots at several precincts.[196] "The electors are told to put their ballots in a secure box within the machine. As soon as the machine is up and running, the poll worker will pull them out and they'll process them," Milwaukee Election Director Susan Edman said.
February 2008	Sequoia 400C	**Riverside County, California.** Two of the six ballot-counting machines in the central office broke down periodically. At most times, one could not operate, delaying the final results.[197] On average, officials were able to count about 15,000 ballots an hour. "The machines were expected to count about 400 ballots a minute. Since the polls closed at 8 p.m. Tuesday, they've averaged about 36 per minute."

[192] **Voting machine glitches statewide delay results.** Lexington Herald-Leader. November 9, 2006. By Greg Kocher.
Archive: http://www.votersunite.org/article.asp?id=6804

[193] **Some voting problems reported in Missouri.** News Leader. November 7, 2006. Associated Press. Archive: http://www.votersunite.org/article.asp?id=6779

[194] **Early problems in Bedford, Cambria reports strong early turnout.** Altoona Mirror. November 6, 2007.
http://www.altoonamirror.com/page/content.detail/id/501647.html?nav=742. Archive: http://www.votersunite.org/article.asp?id=7291

[195] **Consultant to investigate Lake County malfunction.** Daily Herald. February 7, 2008. By Russell Lissau.
http://www.dailyherald.com/story/?id=130066&src=3. Archive: http://www.votersunite.org/article.asp?id=7516

[196] **Polling Place Problems During Wisconsin Primary.** Today's TMJ4. February 19, 2008. By Katie DeLong.
Archive: http://www.votersunite.org/article.asp?id=7548

[197] **Machines delay Riverside County election results.** The Desert Sun. February 6, 2008. By Nicole C. Brambila.
Archive: http://www.votersunite.org/article.asp?id=7501

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
May 2008	Diebold AccuVote OS	**Gaylordsville, Connecticut.** The new optical scanner wouldn't accept ballots. Rebooting corrected the problem.[198]
August 2008	ES&S DS200	**Pasco County, Florida.** Out of 147 scanners, five broke down and eighteen weren't able to transmit results via modem.[199] [P]oll workers had to pull out the thumb drive and take it to the elections office — although in one case it took three trips, because of confusion over who had the thumb drive.
August 2008	ES&S DS200	**Pinellas County, Florida.** 12 scanners had to be replaced, according to county elections spokeswoman Nancy Whitlock. Some experienced paper jams, she said, and on some the screens froze.[200]
August 2008	Diebold OSX	**Sarasota County, Florida.** When workers tried to count absentee ballots on election night, the optical scan machines would not communicate with the server. So more than 10,000 absentee ballots had to be hand-counted.[201] "We could not get the absentee ballots totals to upload into the main server to combine all of the totals together for absentee early voting," says Supervisor of Elections Kathy Dent. So workers had to count them individually.
October 2008	Diebold OSX	**Duval County, Florida.** (Jacksonville.) Seven of the 15 OSX ballot-reading machines used for early voting would not read ballots, indicating the ballots were too long -- and causing long lines. Officials say they tested the machines and that the ballots are the standard size - 17 inches. Officials say Diebold needs to correct the problem. The problem continued the following day, with scanners refusing to read ballots. [202]

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[198] **Voting problems: Count every vote, but not by hand.** The News-Times, May 30, 2008. Archive: http://www.votersunite.org/article.asp?id=7727

[199] **Voter turnout worst in 10 years.** St. Petersburg Times. August 27, 2008. By Steve Bousquet, Janet Zink, Anne Lindberg and Craig Pittman. http://www.tampabay.com/news/politics/elections/article785994.ece. Archive: http://www.votersunite.org/article.asp?id=7857

[200] **Voter turnout worst in 10 years.**

[201] **Computer glitch delays vote count in Sarasota County.** August 27, 2008. WWSB, mysuncoast.com. http://www.mysuncoast.com/Global/story.asp?S=8911224. Archive: http://www.votersunite.org/article.asp?id=7860

[202] **Early Voting off to Rough Start.** FirstCoastNews. October 20, 2008. By Dave Wax. http://www.firstcoastnews.com/news/breaking/news-article.aspx?storyid=121489&catid=17. Archive: http://www.votersunite.org/article.asp?id=7998

Ballot-Scanner Voting System Failures in the News — A Partial List

Date	Equipment	Place/Description
October 2008	Diebold OSX	**Flagler County, Florida.** New scanners are unable to read some ballots. Officials think they are too sensitive to variations in the physical length of the ballot. Election officials replaced the scanners with old ones to avoid a repeat of the problem.[203] (Same problem as in Duval and Leon Counties.) [Supervisor of Elections Peggy Rae] Border said the county's vendor thinks slightly shorter ballots 1/32 of an inch in some cases may have caused the problem. She said she suspected the new machines were more sensitive to the variation in ballot length.
October 2008	Diebold OSX	**Leon County, Florida.** Ballots at the Woodville and Northeast branches are not being read properly by the optical scanners.[204] The machine, deemed the OSX, has what [Leon County Supervisor of Elections Ion] Sancho called a sensitivity problem. "Certain ballots are being rejected across the state," he said. "The machine is too sensitive for differing lengths." If the machine reads the ballot card as too long, the OSX machine will simply not read the card.
November 2008	ES&S and Diebold Optical Scanner	**Florida.** Optical scan machine failures are one of the leading issues facing voters in counties across Florida, according to Election Protection.[205] Voters have reported malfunctioning optical scan machines and massive machine breakdowns in over 35 separate precincts and 25 counties in some of the most populous counties including Orange, Hillsborough, Miami-Dade, and Sarasota.
November 2008	ES&S M100 Optical Scanner	**Hennepin County, Minnesota.** The optical scanners weren't working at Brooklyn Center and Buffalo.[206] In Buffalo, lines backed up at the voting machines, despite no lines at the booths. The machine was spitting out ballots and returning error messages.

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[203] **Problems force Flagler to switch to old voting machines.** Flagler News Journal Online. October 22, 2008. By James Miller, Staff Writer.
Archive: http://www.votersunite.org/article.asp?id=8051

[204] **Ballots not being recorded at two Leon County polling places.** Tallahassee Democrat. October 20, 2008. By Angeline J. Taylor.
Archive: http://www.votersunite.org/article.asp?id=8001

[205] **Voting Rights Watch: Across Florida optical scanner failures are a widespread issue.** Facing South. November 04, 2008.
http://southernstudies.org/2008/11/voting-rights-watch-across-florida.html. Archive: http://www.votersunite.org/article.asp?id=8137

[206] **Voters Report Broken Machines in Buffalo, Brooklyn Center.** My Fox Twin Cities. November 4, 2008.
Archive: http://www.votersunite.org/article.asp?id=8127