

Facts About Electronic Voting

Overview

Election transparency is the fundamental basis of election integrity.

In transparent elections, all the processes of handling and counting ballots are completely open to public view. Nothing is hidden, nothing is secret – except, of course, each individual's voting choices.

Election fraud and miscounts have occurred throughout history, and they will continue to occur. Transparency is the only way to minimize them, but with electronic voting, transparency is removed. Electronic processes that record and count the votes are not open to public scrutiny. Courts have ruled that election software is a trade secret, so even a losing candidate with a computer consultant cannot view it.

With electronic voting, the most important and vulnerable election processes – recording and tallying the votes – are performed in secret, without public oversight. These processes were not developed by government officials charged with ensuring election integrity, but by anonymous software engineers, hired by vendors and not accountable to the public for the quality of their work.

One would expect overwhelming benefits to accompany this sacrifice of transparency and the resulting loss of public control over election processes. **That's the myth.** Ironically, overwhelming disadvantages accompany the sacrifice. The logical question is "Why make the sacrifice?" It's a question more and more people are asking.

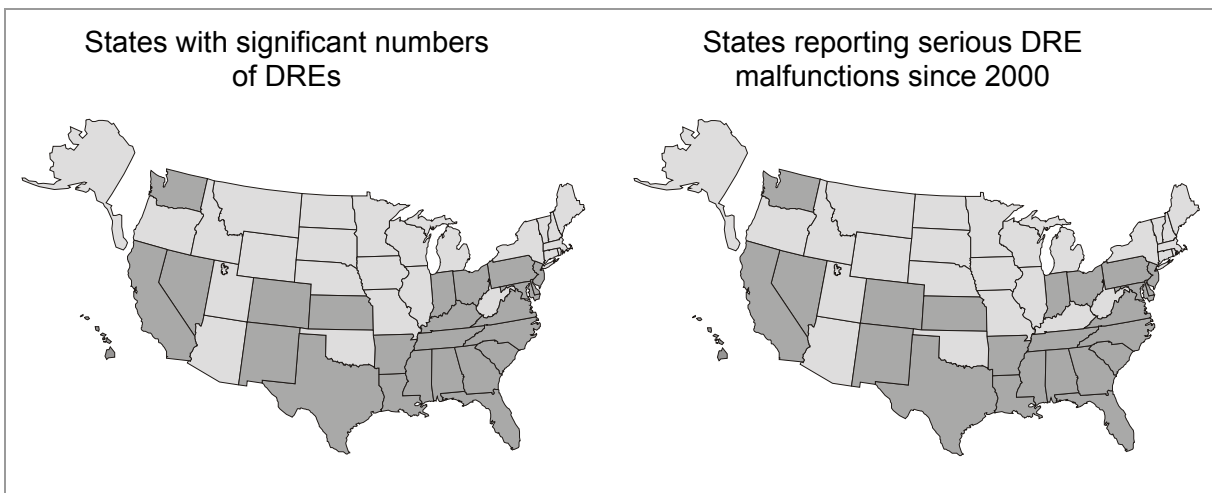
The facts and examples presented in this document are intended to dispel some of the myths surrounding electronic voting. We must lay these myths to rest quickly, for as long as they are believed by decision-makers, our democracy is at risk.

Some of the myth breakers in this document	Page
◆ No federal law requires us to record and count votes electronically. DREs are not the only way to provide independent voting for the disabled.	3
◆ In recent elections, electronic voting machines have:	
- forced states to hold new elections	4
- added votes not cast by voters	5
- subtracted votes cast by voters	7
- changed voters' choices on the screen	8
- given voters the wrong ballot	9
- passed pre-election testing and failed on election day	10
- handed votes to the wrong candidate	11
- reversed election outcomes	11
- broken down causing long lines during elections	13
- recorded votes incorrectly	14

**The facts make it clear.
Electronic voting is neither reliable nor transparent.**

Contents

Overview	1
HAVA Does Not Require the Use of DREs	3
Examples of Electronic Voting Problems in the News	4
1) New Elections Needed after Electronic Voting Failures	4
2) "Phantom" Votes Added by Electronic Voting Machines	5
3) Software Counts to 32,767 and then Counts Backwards	7
4) Votes Jump to the Opponent on the Screen	8
5) DREs Present Incorrect Ballots to Voters	9
6) DREs Present "Phantom" Ballots to Voters	9
7) Totals Dip into the Negative Numbers	10
8) DREs Pass Pre-Election Testing, Fail on Election Day	10
9) Programming Errors Give Votes to the Wrong Candidate	11
10) Voting Machines Present a Default Presidential Candidate	12
11) DREs Breakdown Cause Long Lines During the Election	13
12) Some DREs Don't Provide the Accessibility they Promise	14
13) VVPB Demonstrates DRE Recording Error	14



HAVA¹ Does Not Require the Use of DREs²

A common misconception is that HAVA requires one electronic voting machine in each polling place. This is not true. Section 301(a)(3) of HAVA requires that each polling place provide at least one voting method that allows disabled individuals to vote in privacy. Accessibility is required; DREs are not.

(3) Accessibility for individuals with disabilities.--The voting system shall—

(A) be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters;

(B) satisfy the requirement of subparagraph (A) through the use of at least one direct recording electronic voting system **or other voting system** equipped for individuals with disabilities at each polling place; and

Voting systems that record votes electronically (Direct Record Electronic – DRE) are only one of the many available voting systems that provide accessibility for disabled individuals. Alternative voting systems that allow the disabled to vote unassisted are available and cost a fraction of the price of DRE systems. For example:

- ◆ Electronic ballot-marking devices, such as the AutoMark by ES&S.³
- ◆ Ballot templates (tactile ballots) like those used in Europe and Rhode Island.⁴
- ◆ Free ballot-printing software offered by Open Voting Consortium.⁵

Several DREs are also available with a printer that prints a voter-verified paper ballot (vvpb). One of these devices in a precinct, along with an precinct optical scanner, satisfies the HAVA accessibility requirements.

- ◆ The Avante Vote-Trakker includes an integrated vvpb printer and also has the capability of printing an optical scan ballot.⁶ This system has been qualified to the 2002 standards.
- ◆ AccuPoll has an integrated printer for printing vvpb.⁷
- ◆ Sequoia has qualified the VeriVote system, which has an add-on vvpb printer.
- ◆ Diebold has applied for certification of its vvpb printer add-on.

¹ http://www.fec.gov/hava/law_ext.txt

² Direct Recording Electronic voting machine. Votes are recorded on electronic media rather than paper.

³ <http://www.essvote.com/HTML/home.html>.

⁴ http://www.electionaccess.org/Bp/Ballot_Templates.htm.

⁵ <http://www.openvotingconsortium.org/>.

⁶ <http://www.aitechnology.com/votetrakker2/optical.html>

⁷ <http://www.accupoll.com/>

Examples of Electronic Voting Problems in the News

Hundreds of election equipment malfunctions have been reported in newspapers in recent years, more than 125 of them from the 2004 general election alone. Here are a few examples of common problems serious enough to be reported in the news.

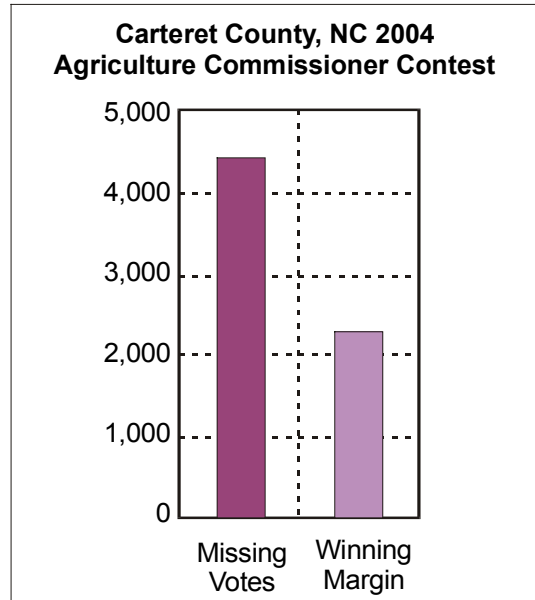
1) New Elections Needed after Electronic Voting Failures

Carteret County, North Carolina. November, 2004. Unilect Patriot DRE

A memory limitation on the DRE caused 4,438 votes to be permanently lost.⁸

Unilect claimed their paperless voting machines would store 10,500 votes, but they only store 3,005. After the first 3,005 voters, the machines accepted -- but did not store -- the ballots of 4,438 people in the 2004 Presidential election.

Jack Gerbel, president and owner UniLect, admitted there was no way to retrieve the missing data. Since the agriculture commissioner's race was decided by a 2,287-vote margin, there was no way to determine the winner. The State Board of Elections ordered a new election, estimated to cost \$3 million,⁹ but after 3 months of legal challenges, the candidate with fewer votes conceded.



Hinds County, Mississippi. November 4, 2003. AVS WINVote DRE

Voting machine malfunctions were so widespread, the Senate called for a new election.¹⁰

AVS WINVote voting computers at some polling places failed to start up. Others overheated and broke down during the election, and not enough paper ballots were available to allow all voters to vote. The Mississippi Senate decided it was impossible to determine the will of the voters. So it declared the election invalid, and a new election was held on February 10, 2004.

⁸ **Computer loses more than 4,000 early votes in Carteret.** Charlotte Observer. Nov. 4, 2004. Associated Press. <http://www.charlotte.com/mld/observer/news/local/10099907.htm>

⁹ **N.C. agriculture commissioner candidate appeals new statewide election.** North County Times. Jan. 4, 2005. By Gary D. Robertson - Associated Press. http://www.nctimes.com/articles/2005/01/05/election2004/20_40_441_4_05.txt

Certify Troxler. Winston-Salem Journal. Dec. 21, 2004.

http://www.journalnow.com/servlet/Satellite?pagename=WSJ%2FMSGArticle%2FWSJ_ColumnistArticle&c=MGArticle&cid=1031779782822&path=!opinion&s=1037645509163

¹⁰ **Long lines, machine malfunctions mark today's voting**

Nov. 4, 2003; By Clay Harden. <http://www.clarionledger.com/news/0311/04/myproblems.html>

District vote set; contender may quit. Democrat says he's "been through enough" in disputed Senate race

Clarion Ledger; Jan. 21, 2004 ; By Julie Goodman. <http://www.clarionledger.com/news/0401/21/ma04.html>

2) “Phantom” Votes Added by Electronic Voting Machines

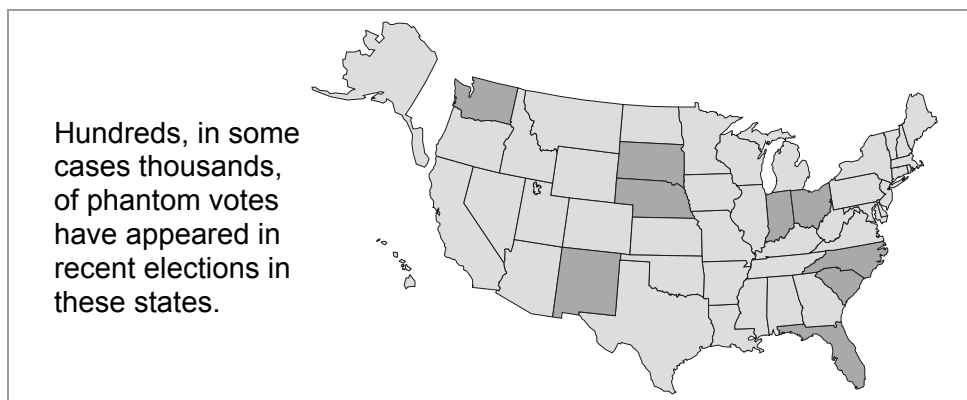
In the first two months after the 2004 General Election, phantom votes (more votes than voters) were reported in Florida, Nebraska, New Mexico, Ohio, South Carolina, North Carolina, and Washington.¹¹ Reports of additional phantom votes continue to flood into the news.

Mecklenburg County, North Carolina. November, 2004. Microvote DRE

Results show nearly 3,000 more votes than voters.

According to election-office data downloaded by the Charlotte Observer, 102,109 people voted early or returned valid absentee ballots. But unofficial results show 106,064 people casting early and absentee votes for president.¹²

Officials suspected that some results may have been counted twice. But they were wrong. A news release from the Mecklenburg County Board of Elections shows that some candidates gained votes in the manual recount of the paper tapes printed by the machine.¹³ The machine or the accumulation software simply tallied wrong.



¹¹ <http://www.votersunite.org/info/previousmessups.asp>

¹² **County retallies early-vote results.** The Charlotte Observer. Nov. 4, 2004. By Richard Rubin and Carrie Levine. <http://www.charlotte.com/mld/charlotte/news/politics/10094165.htm>

¹³ **Board of Elections Audits Early Voting Results; Revises Unofficial Results Released by the Mecklenburg Board of Elections.** Nov. 4, 2004. <http://www.votersunite.org/info/mecklenburgnewsrelease.pdf>

Bernalillo County, New Mexico. November, 2004. Sequoia AVC Edge DRE.

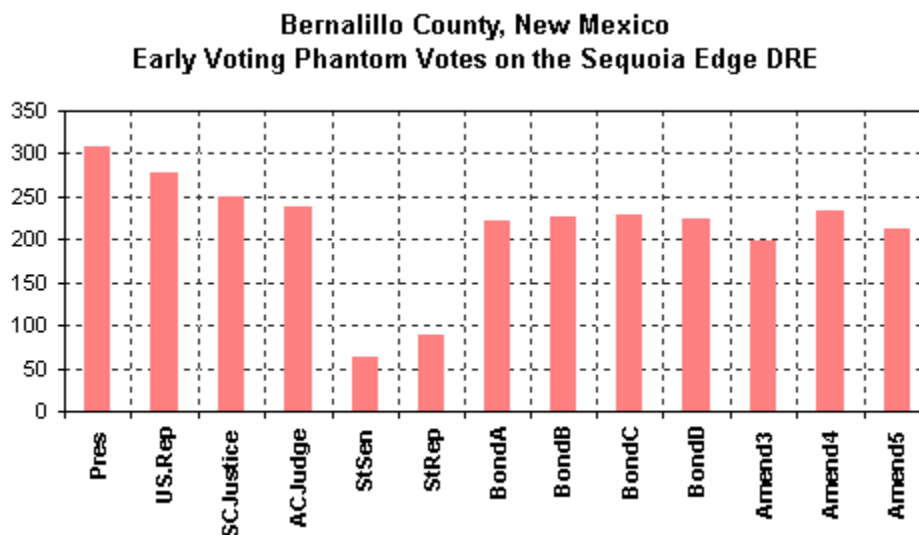
Over 2,700 early voting phantom votes appear in the canvass report.

The New Mexico certified election results reported 2,087 phantom votes (more votes than ballots cast) for president statewide. These phantom votes were concentrated in Bernalillo County. The official canvass report shows 187 precincts in Bernalillo County reporting a total of 1,239 presidential phantom votes, 309 of them on the Sequoia DREs.¹⁴

For example:

- ◆ Precinct 558 reported 178 early voting ballots and a total of 319 votes for president. That's 141 phantom votes, nearly as high as the number of ballots.
- ◆ Precinct 559 reported 234 ballots, with 364 votes for president – 130 more than the number of ballots.

In the presidential race and 12 down-ticket contests examined and shown in the chart below, a total of **2,772 phantom votes** were reported by the electronic voting machines.



In October of 2004, Bernalillo County Clerk Mary Herrera admitted that phantom votes had been added to several elections over the past two years, since she installed a new version of Sequoia WinEDS tally software. She also said her vote-counting experts have always found the phantom votes before they were added to the final tally.¹⁵

New Mexico Secretary of State Rebecca Vigil-Giron says phantom votes are not possible, pointing out that her independent auditors didn't find irregularities like this.¹⁶ Nevertheless, they are present in the certified canvass report.

¹⁴ **Bernalillo County Canvass of Returns of General Election Held on November 2, 2004.** State of New Mexico. <http://www.sos.state.nm.us/PDF/Bernalillo.pdf>

Brief Summary of Bernalillo County Election Data. Jan. 5, 2005. By Ellen Theisen. <http://www.votersunite.org/info/BernalilloSummary.pdf>

¹⁵ **County clerk say phantom votes won't be a problem.** KRQE Albuquerque. Oct. 26, 2004. http://www.krqe.com/expanded3.asp?RECORD_KEY%5BLargeHeadline%5D=ID&ID%5BLargeHeadline%5D=7425.

¹⁶ **Vote Recount Fight 'Is Not Over'.** Albuquerque Journal. Dec. 24, 2004. By Andy Lenderman. <http://www.abqjournal.com/elex/278376elex12-24-04.htm>

3) Software Counts to 32,767 and then Counts Backwards

Broward County, Florida. November 2004. ES&S Unity Tally Software
ES&S vote-tallying software loses 70,000 votes for Amendment 4.

The bug, discovered two years ago but never fixed, began subtracting votes after the absentee tally hit 32,500 -- a ceiling put in place by the software makers.

The problem, which resulted in the shocking discovery of about **70,000 votes** for Amendment 4, a measure allowing a referendum on Las Vegas-style slots at parimutuels in Miami-Dade and Broward, came to light just after midnight Wednesday when Broward's canvassing board shut down.¹⁷

Orange County, Florida. November, 2004. ES&S Unity Tally Software
ES&S vote-tallying software omits counting 8,400 votes.¹⁸

The precinct results posted on the Orange County elections office Web site showed that Senator Kerry beat President Bush by 9,227 votes in Orange County, but the posted results were off by 8,400 votes. The margin was actually only 827 votes.

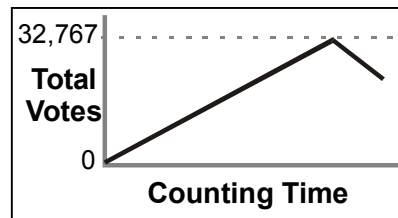
The cause of the error, Orange officials said Thursday, was a software program that could not tabulate more than 32,767 votes in a single precinct. A similar discrepancy affected vote totals posted online for the U.S. Senate race between Republican Mel Martinez and Democrat Betty Castor.

Guilford County, North Carolina. November, 2004. Unity Tally Software
ES&S vote-tallying software changes two outcomes in Guilford County.

In Guilford County, ES&S early voting machines also had capacity problems. Retallying changed two outcomes and gave an additional 22,000 votes to Kerry.¹⁹

Ken Carbullido, Vice President of ES&S Product Development, explained the problem to Guilford County:²⁰

The data storage element used to record votes at the precinct level is a two byte binary field. 32,767 is 2 to the 15th power, which is the maximum number held by a two byte word (16 bits) in memory, where the most significant bit is reserved as the sign bit (a plus or minus indicator). Additionally, ERM precinct count level data is stored in a binary computer format known as two's complement.....



In the letter, Mr. Carbullido admitted the company knew about the problem but had not advised the county.

¹⁷ **Gambling vote glitch mars tally.** Miami Herald. Nov. 5, 2004. By Erika Bolstad And Curtis Morgan. <http://www.miami.com/mld/miamiherald/10103931.htm>

¹⁸ **Distrust fuels doubts on votes: Orange's Web site posted wrong totals.** Orlando Sentinel. Nov. 12, 2004. By David Damron, Sentinel Staff Writer. <http://www.votersunite.org/article.asp?id=3803>

¹⁹ **Winner so far: Confusion.** The Charlotte Observer. Nov. 5, 2004. By Mark Johnson. <http://www.charlotte.com/mld/observer/news/local/10104576.htm?1c>

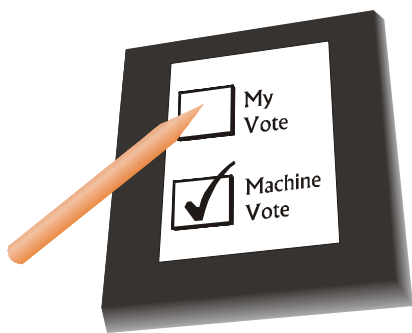
²⁰ <http://www.votersunite.org/info/GuilfordESS.pdf>

4) Votes Jump to the Opponent on the Screen

Bernalillo County, New Mexico. October, 2004. Sequoia DRE

Votes for Kerry jump to Bush.

When the same problem occurred in Bernalillo County, New Mexico, it took some voters as many as three times to get the machine to register their votes for Kerry instead of switching the selection to Bush.



Kim Griffith voted on Thursday— over and over and over.

She's among the people in Bernalillo and Sandoval counties who say they have had trouble with early voting equipment. When they have tried to vote for a particular candidate, the touch-screen system has said they voted for somebody else.

It's a problem that can be fixed by the voters themselves— people can alter the selections on their ballots, up to the point when they indicate they are finished and officially cast the ballot.

For Griffith, it took a lot of altering.²¹

Maryland. November, 2004. Diebold DRE

Some voters manage to correct the vote-jumping on the screen, some don't.

On election day, TrueVoteMD registered 383 reports involving 531 incidents of problems encountered by voters. Among a myriad of other problems detailed in the report, many voters reported votes switching on the screens. Here are some excerpts:²²

Voter Ethel Kerscher at Leisure World Clubhouse in Montgomery County was directed by an election judge to use another machine after she noticed that her vote had been switched from one candidate to another. She submitted her ballot on the second machine, but left the polling place shaken and upset.

Voter David Solomon at the Good Hope Community Center in Montgomery County tried twice to vote for his preferred candidate, but each time the “X” appeared next to another candidate’s name. After getting the assistance of an election judge, he tried a third time and believes he was successful—but is not certain.

Voter Robin Wayne Hood at Havre de Grace H.S. in Harford County tried to change his erroneous selection for president and, while doing so, accidentally submitted his ballot—worse still, before he had made selections for the other races. “A machine should not be allowed to do my voting for me,” he protested.

²¹ **Some Early Voters Say Machines Mark Incorrect Choices.** ABQJournal. Oct. 22, 2004. By Jim Ludwick, Journal Staff Writer. <http://abqjournal.com/elex/246845elex10-22-04.htm>

²² **When the Right to Vote Goes Wrong.** TrueVoteMD. Nov. 2004. http://www.truevotemd.org/Election_Report.pdf

5) DREs Present Incorrect Ballots to Voters

Maryland. March 2004. Diebold DRE Systems

The U.S. Senate contest was omitted from ballots in three counties.

Jeffrey Liss had finished making his selections on Maryland's Democratic-primary ballot and strolled out of the polling place at Chevy Chase Elementary School on the morning of March 2, Super Tuesday. On the sidewalk, he spied a campaign posted for Senator Barbara Mikulski, who is running for her fourth term. Funny, he thought, he didn't remember voting in the Senate race.

Liss went back inside to talk to an election official. And another, and another. He was told he must have overlooked the Senate race on the electronic touch-screen voting machine. But Liss, a lawyer, finally persuaded a technician to check the apparatus. Sure enough, it wasn't displaying the whole ballot.

According to voter complaints collected by Mikulski, who won in the primary, her race didn't appear on ballots in at least **three** Maryland counties.²³

Orange County, California. March 2004. Hart Intercivic eSlate System

Incorrect access codes gave voters incorrect ballots.

Poll workers struggling with a new electronic voting system in last week's election gave thousands of Orange County voters the wrong ballots, according to a Times analysis of election records. In 21 precincts where the problem was most acute, there were more ballots cast than registered voters.

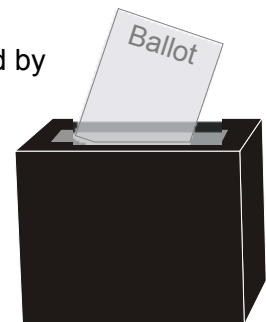
At polling places where the problem was most apparent because of turnouts exceeding 100%, **an estimated 1,500 voters cast the wrong ballots**, according to the Times' analysis of official county election data. Tallies at an additional 55 polling places with turnouts more than double the county average of 37% suggest **at least 5,500** voters had their ballots tabulated for the wrong precincts.²⁴

6) DREs Present "Phantom" Ballots to Voters

Honolulu, Hawaii. September 2004. Hart Intercivic DRE. New eSlate electronic voting machines allowed voters to choose a Green Party ballot, even though there were no Green Party candidates. The error disenfranchised 22 voters.

State elections officials said the computerized voting machines provided by Hart Intercivic allowed voters to "click on" a political party, even though there weren't any candidates running from that party on their island.

So a couple of dozen Green Party ballots were recorded, even though there were no candidates. "We brought that up to the vendor already. They will change that for the next election," [elections spokesman Rex] Quidilla said.²⁵



²³ **The Vexations of Voting Machines.** Time Magazine. May 3, 2004. By Viveca Novak.

http://www.time.com/time/archive/preview/from_redirect/0,10987,1101040503-629410,00.html

²⁴ **7,000 Orange County Voters Were Given Bad Ballots.** Los Angeles Times; March 9, 2004; By Ray F. Herndon and Stuart Pfeifer. Reproduced at: <http://www.votersunite.org/article.asp?id=1476>

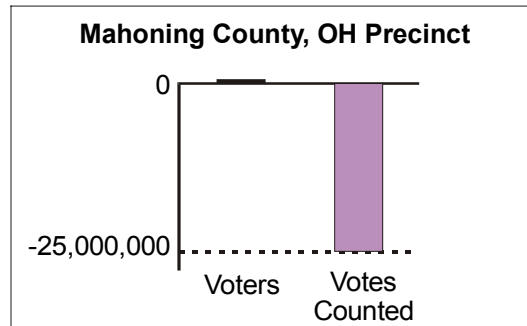
²⁵ **Primary Election Runs Into Problems.** HITV 4. The Hawaii Channel. Sept. 24, 2004. <http://www.thehawaiiichannel.com/news/3760175/detail.html>

7) Totals Dip into the Negative Numbers

Mahoning County, Ohio. November 2004. ES&S DRE

Sixteen of the county's 312 precincts experienced problems on election day. Some of the machines malfunctioned, others had malfunctioning "personal electronic ballot cartridges" which are placed into the machines before each vote to give the voter a ballot and record the votes.

One precinct showed **total votes of negative 25 million**. Four others had similar problems.²⁶



8) DREs Pass Pre-Election Testing, Fail on Election Day

Mercer County, Pennsylvania. November, 2004. Unilect Patriot DRE

Many problems plagued the Unilect Patriot touch screens in Mercer County, even though they had passed the pre-election testing. Mercer County's director of elections admitted that a computer software "glitch" caused touch-screen voting machines to malfunction in about a dozen precincts. Article excerpts with highlighting added:

"I don't know what happened," said James Bennington, who had been assured Friday that **all 250 of the county's touch-screen units had been checked and rechecked**. The county has 100 voting precincts.

Keith Jenkins, director of the county's computer department, agreed that it was a software malfunction and said repeated calls to UniLect Corp., the company that sold the machines to the county in 2001, failed to resolve the problem.

Precincts in Hermitage, Farrell, Wheatland, West Middlesex, Shenango Township and Sharon experienced the most serious machine difficulties, some from the moment the polls opened at 7 a.m. **Some machines never operated, some offered only black screens and some required voters to vote backwards, starting on the last page of the touch-screen system and working back to the front page.**²⁷

²⁶ **Errors plague voting process in Ohio, Pa.** Vindicator. Nov. 3, 2004. Vindicator staff. <http://www.vindy.com/basic/news/281829446390855.php>

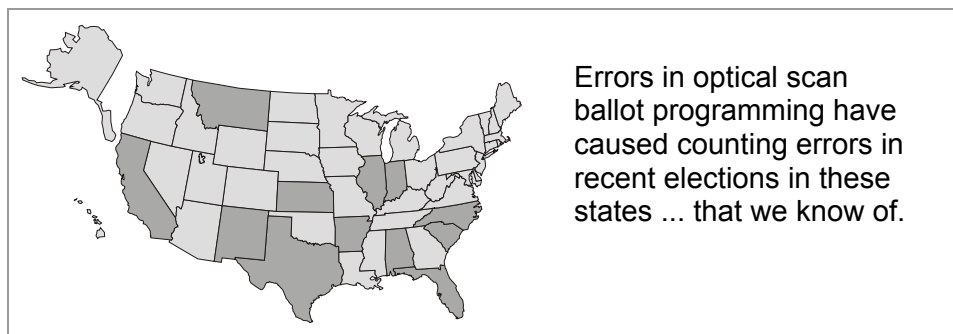
²⁷ **Errors plague voting process in Ohio, Pa.** Vindicator. Nov. 3, 2004. Vindicator staff. <http://www.vindy.com/basic/news/281829446390855.php>

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

9) Programming Errors Give Votes to the Wrong Candidate

Ballot programming is unique to each election. It determines how touches on a screen or marks on a ballot are translated into votes. Errors in ballot programming are detected often on optical scan systems, and the actual votes can be recovered from the paper ballots.

So many ballot programming errors have occurred on optical scan systems that it is only reasonable to believe that many have occurred on DRE systems as well. However, on a DRE, miscounts caused by a ballot programming error are almost certain to go unnoticed. Votes for one candidate could be given to the other candidate, and there would be no way to know. There would be no way to recover if a programming flaw were suspected.



Franklin County, Indiana. November, 2004. Fidler Optical Scan.

Straight-party Democratic votes were counted as Libertarian. County officials and Fidler technicians agree that an election programming error caused the miscount. One outcome was overturned when the program was corrected.²⁸

Carroll County, North Carolina. November, 2004. ES&S Optical Scan.

Vendor mis-programming caused a miscount in one contest. The chip supplied by ES&S for the election miscounted the votes for the JP District 2 race.²⁹

Taos County, New Mexico. November 2002. Sequoia Optical Scan.

A ballot programming error caused the Optech optical scanner to assign votes to the wrong candidates.³⁰

Clay County, Kansas. August 2002 Optical Scan.

The final tally showed that one candidate for commissioner had had won, but a hand recount showed that his opponent had won by a landslide. In one ward, the computer had mistakenly reversed the totals.³¹

Bernalillo County, New Mexico. November 2000. Diebold Optical Scan.

A flawed ballot definition file for the presidential election caused 67,000 absentee and early-voting ballots to be counted incorrectly by the optical scan machine.³²

²⁸ **Fidler admits election blip.** Quad City Times. Nov. 13, 2004. By Tory Brecht. Reproduced at http://www.qctimes.com/internal.php?story_id=1039447&t=Local+News&c=2,1039447

²⁹ **Computer glitch blamed for miscount in JP voting.** Star Tribune. Nov. 10, 2004. By Anna Mathews, CCN staff writer. <http://www.greenforesttribune.com/articles/2004/11/10/news/s1.txt>

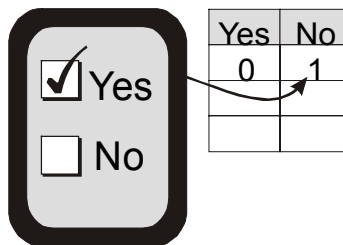
³⁰ Original reference from *Black Box Voting*, Chapter 2. Albuquerque Journal, 7 Nov. 2002; "Taos To Recount Absentee Ballots." The NM Elections Division confirmed that the problem was a programming error.

³¹ **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>

It is virtually impossible to detect ballot programming errors on DRE systems, since there are no paper ballots to verify the actual votes cast. However, here is one case when flawed ballot programming on a DRE caused a serious election miscount. It was detected **only** because voters had also used optical scan paper ballots in the election.

Dallas, Texas. April 2002. ES&S iVotronic DRE.

A candidate for Rowlett mayor was added to the ballot four days before the start of early voting. The change in the ballot definition wasn't programmed into the ES&S electronic voting machines until after early voting began. When the results were combined with the results from ES&S optical scan machines, the programming error caused the tally software to improperly tally results in the mayor's race as well as **17** other races. Nearly 5,000 of the 18,000 ballots were improperly counted.³³



10) Voting Machines Present a Default Presidential Candidate

Travis County. Texas. October 2004. Hart Intercivic DRE

A "default" selection is a selection automatically pre-set by the software. It remains selected unless the user specifically chooses to change it. To provide a default selection on a DRE voting machine is to give a voter a ballot with a candidate already marked.

Yet, election officials in Austin set up the eSlate DREs with Bush/Cheney as the default choice for president/vice-president. Voters who voted a straight party Democratic ticket watched their presidential votes changed to Bush on the review screen. Officials said voters caused this by pressing the wrong button on the second screen of the eSlate machine.

Gail Fisher, manager of the county's Elections Division, theorizes that after selecting their straight party vote, some voters are going to the next page on the electronic ballot and pressing "enter," perhaps thinking they are pressing "cast ballot" or "next page." Since the Bush/Cheney ticket is the first thing on the page, it is highlighted when the page comes up – and thus, pressing "enter" at that moment causes the Kerry/Edwards vote to be changed to Bush/Cheney.³⁴

³² **Human error is cause of N.M. election glitch.** Government Computer News; Nov.20, 2000; Vol. 19 No. 33 http://www.gcn.com/vol19_no33/news/3307-1.html

³³ **Glitch affects 18 races Problems in counting early votes could alter some election outcomes.** Dallas Morning News. May 8, 2002. Ed Housewright, staff writer.

³⁴ **County Responds to Voting Machine Problems. Austin Chronicle.** Oct. 22, 2004. By Lee Nichols. http://www.austinchronicle.com/issues/dispatch/2004-10-22/pols_feature18.html

11) DREs Breakdown Cause Long Lines During the Election

Broward County, Florida. October, 2004. ES&S DRE

Break downs require voters to come back the next day.

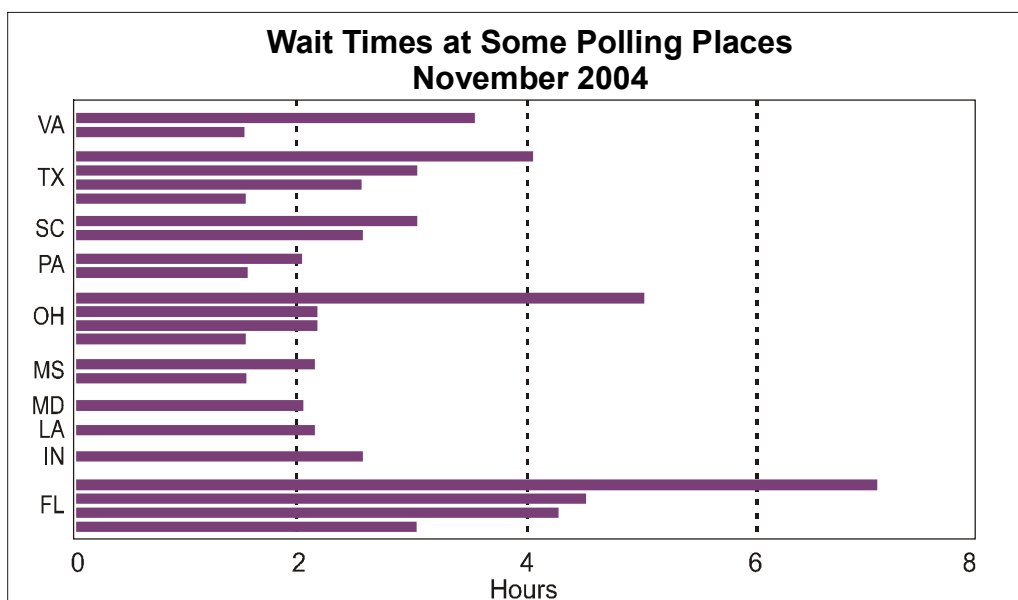
Hundreds of voters showed up to vote early at Howard Forman Health Park, so many that a decision was made to keep the voting facility open until 11 p.m.

Some people waited in line from early in the day until after the sun went down. Unfortunately, for a group of about 50 people, the waiting did not pay off. A mechanical problem with the voting machines caused election workers to close down the polling place.

The group of 50 frustrated voters will have the opportunity to be first in line to vote today. Poll workers took down their numbers and names and will move them to the head of the line.

For one couple, it may not be enough. They were voting on Sunday because they planned to leave on vacation today. Now they will have to choose to cancel their trip, or give up their chance to vote.³⁵

Across the United States³⁶



³⁵ **Voters Turned Away After Waiting Hours.** WPLG Local 10. Nov. 1, 2004. <http://www.local10.com/news/3878344/detail.html>

³⁶ (LA) **Parish by parish list of voter machine problems called in by viewers.** WWLTV.com. Nov. 2, 2004. <http://www.wwltv.com/local/stories/ww110204electionmishap.18e9b314.html>

(MD) **When the Right to Vote Goes Wrong.** Page 7. TrueVoteMD. Nov. 2004. http://www.truevotemd.org/Election_Report.pdf

(SC) **Many Strand voters find long lines at precincts.** Myrtle Beach Online. Nov. 3, 2004. By Jenny Burns. http://www.myrtlebeachonline.com/mld/myrtlebeachonline/news/special_packages/election2004/10085092.htm

(TX) **Frustrated voters wait in long lines due to equipment failure.** ABC13 Eyewitness News. Nov. 2, 2004. By Mark Garay. http://abclocal.go.com/ktrk/news/110204_local_votingprobs.html

(VA) **New touch-screen voting machines present problems in Culpeper, Westmoreland.** The Free-Lance Star. Nov. 2, 2004. <http://fredericksburg.com/News/FLS/2004/112004/11022004/1102problemsforweb>

12) Some DREs Don't Provide the Accessibility they Promise

Santa Clara County, California. May, 2004. Sequoia AVC Edge.

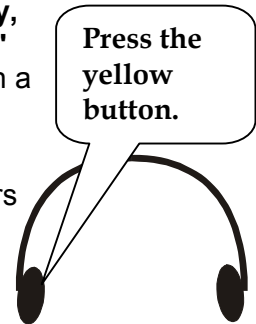
A survey of blind voters in Santa Clara County, California discovered that the overwhelming majority of the voters found the the machines unacceptable and complained that Sequoia didn't listen to their suggestions.³⁷

"Very few of our members were able to vote privately, independently, despite Santa Clara County's supposed 'accessible' touch screens," Dawn Wilcox, president of the Silicon Valley Council of the Blind, wrote in a letter to the registrar of voters after the March primary. "I feel this is an unacceptable state of affairs."

... she surveyed more than 50 members of her group ...Only two members said the machines had functioned smoothly. ...

Four voters said the audio function did not appear to work at all. Others waited up to half an hour for poll workers to trouble-shoot the devices. ...

... poor sound quality, delayed response time and braille that was positioned so awkwardly it could only be read upside down. Chen, the college professor, also said the audio message required blind voters to **press a yellow button**....

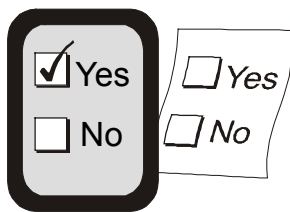


13) VVPB Demonstrates DRE Recording Error

Sacramento, California. August, 2004. Sequoia Veri-Vote.

In a demonstration of its Direct Recording Electronic voting machine with a paper trail, Sequoia demonstrated that its machine failed to report four votes in Spanish.³⁸

Last week, Sequoia vice president and former California assistant secretary of state Alfie Charles was showing off the new Veri-Vote printer that his firm is supplying to Nevada when an astute legislative aide in Johnson's office noticed two votes were missing.



Charles tried again to vote in Spanish with the same result: He cast votes on two mock ballot initiatives, but they were absent from the electronic summary screen and the paper trail.

"The paper trail itself seemed to work fine but what it revealed was when he demonstrated voting in Spanish, **the machine itself did not record his vote**," Chesin said. "Programming errors can occur and the paper trail was the way we caught it."

³⁷ **Blind voters rip e-machines: They say defects thwart goal of enfranchising sight-impaired.**

Mercury News; May 15, 2004; By Elise Ackerman

http://www.mercurynews.com/mld/mercurynews/news/breaking_news/8673336.htm

³⁸ **Lawmakers cut e-voting's paper trail: Manufacturers demonstrating new printers in Nevada were embarrassed when machine failed to recognize votes.** Tri-Valley Herald. Aug. 13, 2004. By Ian Hoffman, Staff Writer. <http://www.votersunite.org/article.asp?id=2512>