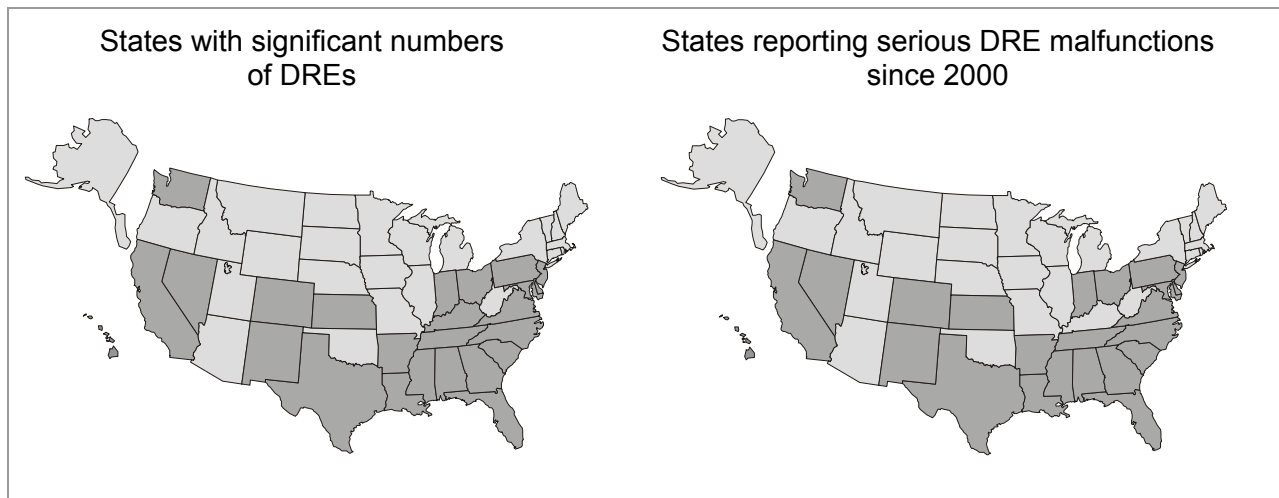


# Direct Record Electronic (DRE) Voting Machines



- ◆ DREs are about twice as expensive to purchase as optical scan systems
- ◆ DREs are more expensive to maintain than optical scan systems
- ◆ DREs have a shorter life span than optical scan systems
- ◆ DREs are not as well tested in pre-election testing as optical scan systems
- ◆ DREs have more hidden costs than optical scan systems
- ◆ DREs' batteries must be recharged continually between elections
- ◆ DREs serve few voters per machine, creating a bottleneck and long lines
- ◆ DRE breakdowns cause long lines at the polls
- ◆ DREs lose votes, which cannot be recovered
- ◆ DREs add votes, which cannot be explained
- ◆ DREs heat up and break down during elections
- ◆ DREs have votes jump to the opposite candidate on the screen
- ◆ DREs are confusing to voters, poll workers, and election officials
- ◆ DREs require more intensive poll worker training, more technical poll workers
- ◆ **DREs prevent voters from seeing their own ballots**
- ◆ **DREs prevent ordinary citizens from observing the counting of votes**

# Ten Types of DRE Problems in the News

While many people are advocating the use of voter-verified paper ballots (VVPB) on DREs, VVPB wouldn't have been sufficient to fix many of the problems that counties have faced when they used DRE systems. This fact causes many people to question the wisdom of using the current crop of paperless DREs, even if they have a printer attached.

Many different types of e-voting problems have occurred in recent years. Hundreds of elections have been impacted by the malfunctions, causing voters to be disenfranchised and calling the results of elections into question. In some cases, paper backup was available, and election officials were able to recover the voters' intents. In other cases, there was NO paper backup, and localities have either certified the elections anyway or conducted a second election to replace the first.

Here are a variety of types of recent problems that have been reported in the news.

- 1) Electronic Voting Machines Fail to Record Ballots<sup>1</sup>**
- 2) Suspicious E-Voting Tallies Cannot be Manually Recounted<sup>2</sup>**
- 3) Tabulation Software Tallies Votes Incorrectly<sup>3</sup>**
- 4) DREs Break Down During Election; New Election Required in One Case<sup>4</sup>**
- 5) Electronic Voting Machines Fail to Start Up<sup>5</sup>**
- 6) Smart Card Encoders Fail to Operate Properly and Break Down<sup>6</sup>**
- 7) Confusion Over Ballot Code Numbers, Voters Receive Wrong Ballots<sup>7</sup>**
- 8) Touch Screens Register the Incorrect Choice<sup>8</sup>**
- 9) Ballot Too Large for Touch Screen; Paper Supplement Required<sup>9</sup>**
- 10) Touch Screens Present Incomplete Ballot to Voters<sup>10</sup>**

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<sup>1</sup> **Electronic Miscounts and Malfunctions in Recent Elections**  
<http://www.verifiedvoting.org/resources/documents/ElectronicsInRecentElections.pdf>

<sup>2</sup> **Electronic vote recount stumps Broward officials**  
Sun-Sentinel; January 10 2004; By Jeremy Milarsky and Lisa J. Huriash, Staff Writers

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**<sup>3</sup> Election results certified after software blamed**

Albuquerque Tribune; November 19, 2002; By Frank Zoretich, Tribune Reporter  
[http://www.abqtrib.com/archives/news02/111902\\_news\\_vote.shtml](http://www.abqtrib.com/archives/news02/111902_news_vote.shtml)

**Voting machine glitch shows thousands of extra votes**

IDG News Service; November 13, 2003; By Grant Gross, Washington Bureau  
<http://www.itworld.com/Tech/2987/031113votingglitch/>

**<sup>4</sup> Long lines, machine malfunctions mark today's voting**

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

**District vote set; contender may quit**

**Democrat says he's "been through enough" in disputed Senate race**

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

**<sup>5</sup> Polling machine problems anger many voters**

From 11 News Staff Reports; 07:27 PM CST on Tuesday, November 4, 2003  
[http://www.khou.com/news/local/houstonmetro/stories/khou031104\\_mh\\_pollingprobs.1a536189.html](http://www.khou.com/news/local/houstonmetro/stories/khou031104_mh_pollingprobs.1a536189.html)

**<sup>6</sup> Poll workers, voters cite tied-up hotline, poor training, confusion**

Union Tribune; March 7, 2004; By Jeff McDonald and Luis Monteagudo Jr.  
<http://www.signonsandiego.com/news/politics/20040307-9999-1n7vote.html>

**Voters short changed at the polls**

Oakland Tribune; March 7, 2004; By Ian Hoffman, Staff Writer  
<http://www.oaklandtribune.com/Stories/0,1413,82~1865~2002277,00.html>

**<sup>7</sup> 7,000 Orange County Voters Were Given Bad Ballots (Excerpts)**

Los Angeles Times; March 9, 2004; By Ray F. Herndon and Stuart Pfeifer, Staff Writers  
[http://story.news.yahoo.com/news?tmpl=story&cid=2026&ncid=2026&e=3&u=/latimests/20040309/ts\\_latimes/7000orangecountyvotersweregivenbadballots](http://story.news.yahoo.com/news?tmpl=story&cid=2026&ncid=2026&e=3&u=/latimests/20040309/ts_latimes/7000orangecountyvotersweregivenbadballots)

**<sup>8</sup> NAACP disputes sales tax results**

**DuBose files complaint in Muscogee Superior Court**

Ledger-enquirer; November 13, 2003; By Mark Rice, Staff Writer

**Area Democrats say early votes miscounted**

**Court hearing delayed as meeting planned on touch-screen problems**

The Dallas Morning News; October 22, 2002; By Ed Housewright and Victoria Loe Hicks  
Staff writers Gromer Jeffers Jr. and Todd J. Gillman contributed to this report.

**<sup>9</sup> Blah-blah ballot too long for touch screen**

Miami Herald; Feb. 26, 2004; By Jesse Abrams-Morley  
[http://www.miami.com/mld/miamiherald/news/local/states/florida/counties/broward\\_county/8043698.htm](http://www.miami.com/mld/miamiherald/news/local/states/florida/counties/broward_county/8043698.htm)

**<sup>10</sup> Think You Voted in Md.? Think Again**

Washington Post; March 7, 2004; By Jeffrey F. Liss, a lawyer who lives in Chevy Chase  
<http://www.washingtonpost.com/wp-dyn/articles/A37007-2004Mar6.html>