

September 18, 2004

They Said It Couldn't Be Done

Many computer scientists insist that electronic voting machines will be trustworthy only when they produce paper receipts that can be audited. But supporters of electronic voting have long argued that doing so would be extremely difficult, if not impossible. Nevada proved the naysayers wrong this month, running the first statewide election in which electronic voting machines produced paper records of votes cast. Election officials across the country now have no excuse not to provide systems that voters can trust.

There is a growing body of evidence indicating that electronic voting machines are vulnerable to tampering and to software glitches that can skew the vote totals. The best safeguard is a voter-verifiable paper trail, receipts that are printed out during the voting process. Voters can view the receipts to check them against the choices they made on the computer screens. Each receipt remains under glass and, after the vote is cast, falls into a locked box. The receipts can be used in a recount or an audit to check the accuracy of the machine tallies.

The main argument against voter-verifiable paper trails is that they are impractical. At a May meeting of the federal Election Assistance Commission, and again at the National Association of State Election Directors' summer conference, local election officials denounced the campaign for voter-verifiable paper records. At both events, critics waved a receipt about three feet long, saying one that big would be needed for Los Angeles County's lengthy ballot.

But Nevada's secretary of state, Dean Heller, has always believed that paper records are practical, and this month he proved it. Primary voters across the state cast votes on machines that printed out paper records, and none of the nightmarish possibilities came to pass. The poll workers had no trouble with the technology. And election officials had spare machines and printers on hand in the few cases when printers jammed or had other mechanical problems.

Conditions in Nevada favored success. The turnout was light, and the ballot was short enough that the receipt was only about five inches long. But there is no reason to believe that paper trails could not work in any election. Alfred Charles, a vice president of Sequoia Voting Systems, which made the machines used in Nevada, says that if the receipts are done properly, listing only the candidates and referendum choices that the voter actually selects, length should not be a problem, and it is unlikely that even Los Angeles County would require anything like three-foot-long paper receipts.

Even if Nevada's approach - attaching printers to touch-screen machines - had failed, there would still be other ways to provide a paper record. Probably the best solution is the optical scan system used now in many jurisdictions, where voters mark paper ballots that are then read by computers. In optical scan systems, the paper ballots the voters fill out can be retained and used as a check against the machines' tallies.

Nevada has taken the lead on paper trails not only in its own elections, but also in Congress. Its senators - John Ensign, a Republican, and Harry Reid, a Democrat - have co-sponsored the bipartisan Voting Integrity and Verification Act, one of a number of pending bills that would require that all electronic voting machines produce voter-verifiable paper trails. Congress should pass such legislation right away so all Americans can have the same confidence in their elections as Nevadans now have.

[Copyright 2004 The New York Times Company](#) | [Home](#) | [Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [Help](#) | [Back to Top](#)