

Posted on Thu, Dec. 15, 2005

ELECTIONS

New tests fuel doubts about vote machines

A top election official and computer experts say computer hackers could easily change election results, after they found numerous flaws with a state-approved voting-machine in Tallahassee.

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TALLAHASSEE - A political operative with hacking skills could alter the results of any election on Diebold-made voting machines -- and possibly other new voting systems in Florida -- according to the state capital's election supervisor, who said Diebold software has failed repeated tests.

Ion Sancho, Leon County's election chief, said tests by two computer experts, completed this week, showed that an insider could surreptitiously change vote results and the number of ballots cast on Diebold's optical-scan machines.

After receiving county commission approval Tuesday, Sancho scrapped Diebold's system for one made by Elections Systems and Software, the same provider used by Miami-Dade and Broward counties. The difference between the systems: Sancho's machines use a fill-in-the-blank paper ballot that allows for after-the-fact manual recounts, while Broward and Miami-Dade use ATM-like touchscreens that leave no paper trail.

"That's kind of scary. If there's no paper trail, you have to rely solely on electronic results. And now we know that they can be manipulated under the right conditions, without a person even leaving a fingerprint," said Sancho, who once headed the state's elections supervisors association.

The Leon County test results are likely to further fuel suspicions that the new electronic voting systems in Florida, in place since the 2002 elections, are susceptible to manipulation.

When the debate hit fever pitch before last year's presidential election, many conservatives said questions about the machinery were a liberal ploy to undermine confidence in the voting system.

Elections chiefs in Broward and Miami-Dade said Wednesday they have good security and are not particularly concerned -- though both have had "glitches" that have been tough to explain.

Sancho agrees that good security is key, but said he's not sure he won't also have problems with the \$1.3 million ES&S system, which he'll also test.

DIEBOLD USERS

Twenty-nine counties, including Monroe, use different versions of paper-ballot voting systems manufactured by Diebold, a leading manufacturer of security systems and voting machines. One county uses Diebold touchscreens.

A spokesman for Diebold Election Systems Inc. could not be reached for comment Wednesday.

Sancho said Diebold isn't the only one to blame for hacker-prone equipment. The Florida secretary of state's office should have caught these problems early on, he said, and the Legislature should scrap a law severely restricting recounts on touch-screen machines and equip them with the means of producing a paper trail.

A spokeswoman for the secretary of state's office said any faults Sancho found were between him and Diebold.

"If Ion Sancho has security concerns with his system, he needs to discuss them with Diebold," spokeswoman Jenny Nash said.

Sancho first clashed with Diebold in May, when he teamed up with a nonprofit election-monitoring group called BlackBoxVoting.org, which has made a crusade of showing that electronic voting machines are subject to fraud. BlackBox hired Herbert Thompson, a computer-science professor and strategist at Security Innovation, which tests software for companies such as Google and Microsoft.

Thompson couldn't hack into the system from the outside. So Sancho gave him access to the central machine that tabulates votes and to the last school election at Leon County High.

Thompson told The Herald he was "shocked" at how easy it was to get in, make the loser the winner and leave without a trace. The machine asked for a user name and password, but didn't require it, he said. That meant it had not just a "front door, but a back door as big as a garage," Thompson said.

From there, Thompson said, he typed five lines of computer code -- and switched 5,000 votes from one candidate to another.

"I am positive an eighth grader could do this," Thompson said.

After BlackBox and Sancho announced the results, Diebold's senior lawyer, Michael Lindroos, wrote Sancho, Leon County and the state of Florida questioning the results and calling the test "a very foolish and irresponsible act" that may have violated licensing agreements.

Over the past few months, computer expert Harri Hursti tried to manipulate election results with the memory card inserted into each Diebold voting machine. The card records votes during an election, then at the end of the day is taken to a central location where results are totaled.

Hursti figured out how to hack into the memory card by using an agricultural scanning device easily available on the Internet, said BlackBox founder Bev Harris. He learned how to hide votes, make losers out of winners and leave no trace, she said.

Hursti couldn't be reached for comment.

With some variation, both Miami-Dade and Broward use these cartridge-like cards to record votes and report election results. Experts like Thompson say they believe the counties could be subject to electronic ballot-rigging -- which would be hard to detect and correct without a paper trail.

FINAL TEST

Sancho said he tried to discuss the problems with Diebold, but met with resistance. On Monday, he did one final test with Hursti at the Leon County supervisor's office, Hursti hacked the memory card to spit out seven "yes" votes on an issue and one "no" vote.

Then, six "no" votes and two "yes" votes were cast into the machine the same way voters would. Those results didn't show up in the final tally -- just the ones hacked into the card.

Officials for ES&S, which makes the systems used in Miami-Dade and Broward counties, couldn't be reached for comment Wednesday.

Seth Kaplan, a spokesman for the Miami-Dade elections office, said officials continually monitor the quality and security of their machines.

"The problem of election fraud predates current technology by hundreds of years. We have people we trust and in our case we have checks to reconcile the results," Kaplan said.

But Broward's election supervisor, Brenda Snipes, said she's at least intrigued. She, too, vouches for her office's security, but says there's a need to remain vigilant.

"Is hacking possible? We think we have a secure system. With technology, those people who have that level of expertise, I guess that could be possible," Snipes said. ``We need to see what Ion did. He tries a lot of things. He's always analyzing things."

But Sancho said the time for passive monitoring is over. The Diebold problems show that simple tests haven't been done on at least one major voting system, he said.

"These were sold as safe systems. They passed tests as safe systems," Sancho said. ``But even in the so-called safe system, if you don't follow the paper ballots, there is a way to rig the election. Except it's not a bunch of guys stuffing ballots in a precinct. It's possibly one person acting in secret changing thousands of votes in a second."