

## **electionlineWeekly — March 5, 2009** **electionline.org**

### **I. In Focus This Week**

#### **Report finds fault with Premier election system**

*Problems identified include dropped ballots and deleted logs*

By [Kat Zambon](#)

The software component of voting systems developed by Diebold Election Systems, Inc. (now Premier Election Solutions, Inc.) has errors that allow operators to delete ballots without warning and manipulate audit trail logs according to a March 3 [report](#) by Debra Bowen, California secretary of state.

These errors caused the system to drop 197 ballots from official November 2008 election results in Humboldt County, Calif.

Either of these errors should have kept the system from receiving certification, the report said. The software, Global Election Management System (GEMS) version 1.18.19, was certified by the [National Association of State Election Directors](#) (NASSED) in February 2004.

While the secretary of state was unaware the system had the potential to drop ballots, company e-mails show that [Premier Election Solutions](#) learned of the problem in October 2004. Instead of alerting NASSED, the secretary of state or the [U.S. Election Assistance Commission](#) (EAC), Premier emailed election officials in the 11 California counties using the system with directions to avoid losing ballots without explaining why they were necessary.

“Secretary Bowen was certainly surprised and deeply concerned that a voting system manufacturer would not notify the secretary of state’s office and be more up front about something they’d known about for several years,” Nicole Winger, deputy secretary for communications in the secretary of state’s office said. “Those are both alarming discoveries.”

#### **The “deck zero” problem and how it was found**

When GEMS version 1.18.19 is used with a central-count optical scan system, it counts ballots in batches or decks. If an operator scans the first deck of ballots or “deck zero,” closes and reopens the central count server window, then deletes any subsequent deck, the system automatically deletes deck zero without alerting the operator.

The problem was caught in Humboldt County as a result of a unique collaboration between Carolyn Crnich, voter registrar and a group of concerned citizens who formed the [Humboldt County Election Transparency Project](#). Crnich allowed members from the project to scan all of the ballots cast in the election and put them online, providing them with a computer and a high speed, high capacity scanner.

About a dozen volunteers scanned ballots in November, Mitch Trachtenberg, Humboldt County Election Transparency Project volunteer and [TEV Systems](#) technology director said. Scanning took about 65 hours and eventually the volunteers found that there were more ballots than GEMS had reported.

Volunteers told Crnich on November 30, a day before she was required to certify the election. Crnich certified the election on December 1 but continued to investigate the missing ballots.

“We looked at it to try to figure out if something had been double-scanned or if something got left off in the GEMS official count and we found that everything was scanned,” Crnich said. “So we started looking for precincts that had an abnormal turnout compared to their neighbors.”

When volunteers found the precinct, Crnich found the precinct's mail ballots, which had been counted on November 1. She compared the count from November 1 to the final canvass and found that 197 ballots had been left out of the last count.

"My first call was to Premier and they said, 'there's something about a zero deck,'" she said. "My second call was to the secretary of state to say my election results were wrong."

### **Audit logs accidentally deleted**

In the course of the secretary of state's investigation into the "deck zero" problem, researchers found problems with the GEMS audit logs. The audit trail logs allow operators to delete entries in certain instances with a button labeled "Clear." Clicking "Clear" doesn't alert the operator that doing so will permanently delete the records nor does it ask the operator to confirm the action.

Subsequent versions of GEMS don't have a "Clear" button but while the "deck zero" problem only affects jurisdictions that use a central-count system, the "Clear" button affects all jurisdictions using GEMS version 1.18.19. Several counties in Florida and Texas use the system.

Following the November 2008 election, the report said an election official in another California county received a public records request for audit trail logs. The election official accidentally pressed "Clear" instead of "Print" as the two buttons were near each other, unintentionally deleting the records.

*Wired* [reported](#) that Ciber, Inc. tested and certified GEMS version 1.18.19 with the "Clear" button. Ciber was suspended from testing voting systems in 2007 for failing to follow quality control procedures and documenting that they had conducted all required tests, according to [The New York Times](#). The EAC [re-accredited Ciber](#) in 2008.

The logs also fail to record deletions of decks of scanned ballots, record incorrect dates and times for certain decks of ballots and allow operators to delete audit log entries that would be necessary to reconstruct actions that occurred during the vote counting process.

While tallying the votes in November, Humboldt County election officials intentionally deleted 26 decks, and then rescanned them. The logs indicated that the ballots were re-entered but there was no record showing that decks had been deleted in the first place. Humboldt County officials also found that some decks scanned on November 3 were dated November 25.

### **March 17 hearing scheduled**

Bowen will hold a [hearing](#) in Sacramento on March 17 to discuss the "deck zero" problem and allow for public comment on possibly withdrawing approval for GEMS version 1.18.19.

"Anyone can publicly testify and raise concerns or dispel myths and after that public hearing, Secretary Bowen will take into account everything that she and her staff have learned and decide whether to take action against Premier," who will also be invited to testify, Winger said.

"This is the second time Diebold's being required to come address the secretary of state on a security problem," Kim Alexander, [California Voter Foundation](#) founder and president said. In 2004, former secretary of state Kevin Shelley found that Diebold had installed software that was uncertified for use in California elections, a violation of state law that led to the system's decertification, she said.

"This vendor has a poor track record when it comes to election security in California," Alexander added. "I think election officials will be less forgiving towards Diebold since this is the second time they've had a problem."

Chris Riggall, spokesperson for Premier said that GEMS version 1.18.19 is an old system and if Bowen wants to decertify it, "we think that's obviously within her purview and we don't have any objection to that ... most of the counties in California are using a later version that corrects that issue."

“Only three counties [in California] have been using that version of software but other states are apparently using that so this is informative on a national level,” Winger said.

Bowen also sent a [letter](#) to Gineen Beach, EAC chair encouraging her to post the report on the EAC Web site. She wrote that she sponsored a bill in the California state senate that would require voting system vendors to report any flaws found in their systems to the EAC and election officials in all the states where the systems are used.

“Should the measure become law, the EAC, voters and elections officials in every other state will reap the benefits of California’s work,” she wrote. “However, I would still encourage the EAC to adopt a similar policy so that California and its voters may benefit from the discovery of voting system-related problems in other states that are reported to the EAC.” [SB 541](#) was introduced by state Senator Fran Pavley, D-Agoura Hills, on February 27.

“We’re all in favor of communicating as extensively as possible with local election officials, state election officials and the EAC,” Riggall said. Unlike when the “deck zero” error was discovered, Premier now has a product advisory note process to alert customers when an issue is discovered with one of their products.

At the same time, the software in question was certified at both the federal and state levels, Riggall said, with the “deck zero” error and “Clear” button. “This software was certified by the state of California. It wasn’t slipped in in the dark of night, it went through all of the procedural reviews at the time that it should have been.”

Trachtenberg was also discouraged that the problems weren’t caught during certification. “It’s bigger than Diebold ... you would hope that a system that had been federally certified wouldn’t have a delete button,” he said.

Neither Trachtenberg nor Crnich had anticipated that they would find flaws in the system when they started the transparency project

“I hadn’t expected that we would find any problems,” Trachtenberg said. “It’s almost inconceivable to me that there were problems.”

“The transparency project wasn’t intended to out anybody, it was intended to raise the confidence level of voters and it sure didn’t do that,” Crnich said. “Regardless of what vendor we’re using at the time, I hope that as long as I’m the registrar of voters I intend to see it continue.”

## II. Election Reform News This Week

- Alabama Gov. Bob Riley filed a brief with the U.S. Supreme Court stating that continuing to get [federal approval for election-related changes is an unnecessary burden on the that state](#). According to *The Birmingham News*, by keeping Alabama on the Justice Department’s watch list for discrimination against minority voters, “Congress wrongly equated Alabama’s modern government, and its people, with their Jim Crow ancestors,” lawyers for the governor wrote. Congress in 2006 renewed the landmark voting rights law and the section that requires nine states, plus local jurisdictions in several other states, to prove that changes to election procedures, such as moving a polling place, do not disenfranchise black voters. Alabama rightfully deserved its place on the list in 1965, but no longer, Riley argues in the brief, filed last week. Of the 3,279 times Alabama has asked for Justice Department “pre-clearance” for changes between 1996 and 2005, it received two rejections, the brief states.
- State election officials in Maryland are warning that no vendor will possibly be able to meet the state’s March 4 [bidding deadline bidding for a new paper-based voting system](#). In 2007, the General Assembly mandated that Maryland switch from its current DRE-system to a paper-based voting system in time for the 2010 mid-term elections. According to *The Baltimore Sun*,

Maryland's move to paper ballots also has raised concerns among the disabled community, which objects to a system that diminishes voting privacy because some would need assistance to complete paper ballots. And fiscal conservatives say the estimated five-year cost of nearly \$39 million is too much to pay when the state is struggling to balance its budget. The problems are so vexing that some are suggesting delaying implementation of a system that provides a verifiable paper trail beyond the 2010 elections. The State Board of Elections warned that unless lawmakers pass emergency legislation, the agency won't be able to purchase a new system. The law requires that the new system be certified by certain laboratories and meet federal guidelines for voters with disabilities. But no optical-scan voting system meets those standards, officials said.

- The Chicago Board of Elections unanimously recommended this week [switching to a vote-by-mail system](#) for single-office special elections. According to *The Associated Press*, the board members made the recommendation in the wake of Tuesday's special primary to fill the 5th Congressional District seat recently vacated by Rahm Emanuel, which cost an estimated \$1.75 million but saw low voter turnout. Only 18 percent of the eligible voters in Chicago cast ballots on Tuesday, and the turnout in suburban precincts was even lower -- only 10.8 percent, said board chairman Langdon D. Neal. The April general election will cost another \$1.75 million, Neal said. "In the City of Chicago alone, this election cost about \$33 per ballot," Neal said in a statement. "These costs would have been even higher if this were a special election for alderman in one ward. But more importantly, that \$1.75 million translates to money for real jobs in an economy that can't afford to lose any more." The change would require approval from the Illinois legislature.
- The town of Burlington, Vermont re-elected Mayor Bob Kiss this week in an election that used the instant-runoff voting system. However losing candidate Kurt Wright told the *Burlington Free Press* that he [might challenge the instant runoff vote system](#) that had him ahead in the contest for mayor of Burlington for two rounds of vote counting before a third round gave the race to Kiss. "We won the first two rounds," Wright told supporters after learning the results of the five-way contest. "We were that close to winning the whole thing." Wright, a Republican and longtime opponent of the instant-runoff vote system, said he might ask for a recount of the votes or find some other way to challenge the methodology used to tabulate the votes.

### III. Research and Report Summaries

*electionline* provides brief summaries of recent research and reports in the field of election administration. Please e-mail links to research to [sgreene@pewtrusts.org](mailto:sgreene@pewtrusts.org).

[Operational, Security and Accountability Review of the November 4, 2008 Riverside County, CA, Election and Ballot Process](#) – Best, Best & Krieger, LLP for the Riverside County Board of Supervisors, March 1, 2008

In a review of the Riverside County, CA November election, consultants found most observed problems were due to congestion, limited resources and human error. There was no evidence of tampering, misconduct or fraud, however some security, chain-of-custody and tamper control procedures were found to be lacking or have weaknesses. Several polling places were poorly designed or inadequate in other areas and the post-election reconciliation process at the polls was challenging for many poll workers. The registrar's office generally met requirements of state and federal election law, but eight of the California Secretary of State's office 41 touch-screen electronic voting system re-approval conditions were incomplete and in need of further review. Additionally, the required manual tally of electronic ballots was not completed when the election was certified on December 2, 2008, but rather two months later on February 2, 2009.

[Report on Election Auditing](#) - The Election Audits Task Force of the League of Women Voters of the United States, January 2009

In 2008 the League of Women Voters assembled an elections audit task force to provide guidance about audits of election procedures and processes as well as post-election audits. The report recommends guidelines for conducting audits, criteria for good auditing law, a glossary of election audit terms, and an appendix of election audit resources.

## IV. Opinion

National: [Instant-runoff voting](#)  
Alabama: [Poll workers](#)  
California: [Voting locations](#)  
Colorado: [Election reforms](#); [Paper ballots](#)  
Hawaii: [Vote-by-mail](#)  
Kansas: [Open primary](#)  
Maryland: [Polling places](#)  
Minnesota: [Election reform](#)  
Mississippi: [Voter ID](#)  
Missouri: [Boone County](#)  
Oklahoma: [Voter ID](#)  
Pennsylvania: [Electronic voting machines](#)  
South Carolina: [Voter ID](#)  
Tennessee: [Primary process](#); [Voter ID](#)  
Texas: [Early voting](#)

*\*\*some sites require registration*

## V. Job Opportunities

*All job listings must be received by 12 p.m. Eastern on Wednesday for publication in our Thursday newsletter. Job listings are free but may be edited for length. Whenever possible, include Internet information. Please email job postings to [mmoretti@electionline.org](mailto:mmoretti@electionline.org)*

**Associate, Make Voting Work, Pew Center on the States, Washington, D.C.**-- will help design and implement research and analysis for MVW, coordinate convenings, manage special projects, maintain internal and external communications and support other programmatic investments and budget activities. The associate may also undertake special projects aimed at improving the overall operation of MVW and other projects in the PCS elections portfolio. Qualifications: Bachelor's degree required; advanced degree preferred; one to three years of relevant professional experience, including demonstrated research and analytical and writing skills. Experience in public policy in general and election administration in particular preferred; ability to write clearly and cogently for internal audiences, policy makers, the media and public; ability to synthesize and summarize large amounts of information and to focus quickly on the essence of an issue, as well as to identify, understand and synthesize different policy perspectives; experience working with academics, nonprofits and other contractors conducting research and policy analysis, helping ensure the results are rigorous, policy relevant and timely and are communicated clearly and persuasively to target audiences; strong systems skills including Microsoft office products required; database and online research applications preferred; demonstrated time- and project-management skills, including an ability to meet multiple deadlines by maintaining a high level of organization; ability to set priorities and identify resources; ability to work independently with limited supervision. Flexible and able to routinely juggle multiple competing priorities and work in teams of both support and senior staff to meet project goals. For more information on the position and how to apply, click [here](#).

**Voter Registrar, City of Fairfax, Va.** — appointive office of the General Registrar. This is a four-year appointment. Must be a qualified voter of the City of Fairfax or be willing to become a qualified voter before appointment. The General Registrar is responsible for voter registrations and election management. Must perform the duties outlined in Virginia Code Sec. 24.2-114 to include timely

processing of registration applications and maintaining accurate and current registration records; assuring compliance with all laws and regulations regarding voter registration. Election management duties are carried out at the direction of the Electoral Board and include the maintenance, preparation and deployment of the voting machines; assuring the availability of the polling places; posting of precinct signs and preparation of election materials for polling places; assisting the electoral board to insure the uniformity, legality and purity of elections. Required to manage all personnel, fiscal and physical resources as needed to provide all required and desired services of the office; develop and administer a public information program to encourage registration and voting; deal with inquires and complaints from the general public. **Qualifications:** Candidates must possess expertise in the voter registration process and in election management. Applicants must possess knowledge of and ability to easily deal with cutting edge technology, including both standard and proprietary computer programs. Candidate must also be able to deal with the public in a polite, courteous, pleasant and professional manner in writing, in person and by telephone. Knowledge of local government, community and political structure; budgeting; standard office procedures; federal and state election laws; management skills, including prior supervision of personnel; ability to recruit volunteers; public relations; good oral and written communications skills are required. The candidate must be able, when necessary, to work nights and weekends. Candidate must possess a valid Virginia driver's license and be able to travel within the City with their own vehicle. **Salary:** \$52,188 - \$57,537. **Application:** All interested candidates should send a cover letter, resume, and city application to: City of Fairfax Personnel, 10455 Armstrong Street, Fairfax, VA 22030. Applicants may also apply online at <http://www.fairfaxva.gov> and attach a resume and cover letter. **Deadline:** 5:00pm on Monday, March 9, 2009.