

Cleveland State University



Center for Election Integrity

MEMO

TO: Cuyahoga County Board of Elections Board Members;
Cuyahoga County Commissioners Board Members (c/o County Administrator
Dennis Madden)

FROM: Candice Hoke, for the CSU Center for Election Integrity/
Public Monitor of Cuyahoga Election Reform

DATE: December 17, 2007

RE: Transition to a new Voting System and Vendor: Factors to consider

The Secretary of State has requested that the Cuyahoga Board of Elections (CCBOE) consider an expedited transition from insecure DRE-touchscreen voting devices to exclusively high speed optical scanning of paper ballots. This decision is probably the single most critical decision the Board faces for the next several years, as the procurement will consume scarce county dollars and will likely commit the CCBOE to a particular vendor and technology for two or more years to come.

To assist the Board and fulfill the appointment of the Boards' designated agent for monitoring CCBOE election improvements through 2008, this memo recounts some of the factors that might prove relevant as the Board endeavors to make the best decisions for the March 4th federal primary and beyond. The primary source used here to identify relevant factors is the *Final Report of the Cuyahoga Election Review Panel*, which investigated the causes and cures of the May 2006 Federal Primary debacle—the election that became a major cause of electoral ignominy for Cuyahoga County. Since August 2006, the CCBOE has been working assiduously at all levels and in all departments to generate quality performance in election preparation, Election Day, and tabulation/reporting activities and retire the unfortunate reputation.

This Memo assumes familiarity with the Diebold/Premier voting system's technical and security limitations as documented in the OH-SOS's recently published study, in earlier studies, from CCBOE staff and voter experience, and perhaps from the Monitor's memoranda in 2006-07. It further assumes a desire to eliminate use of DREs at the polling places but to do so in a manner that will still permit the CCBOE to conduct a successful election. Thus the memo addresses:

1. The May 2006 Federal Primary "Nightmare" Election: Brief Background
2. Avoiding Another Disaster: Recommended Criteria for New Voting Technology Procurement/Implementation

A separate submission will include:

3. Various Action Options: Pros and Cons

Appendix: CERP Final Report—Relevant Findings and Recommendations

**1. The May 2006 Federal Primary "Nightmare" Election:
Brief Background from the CERP Final Report**

Former Director Vu desired the County to purchase Diebold DRE units for precinct use. After Secretary Blackwell finally approved their use in late spring 2005,

"[t]he hope remained that the CCBOE would be able to launch the system in small municipal elections in September 2005, and would be ready for a county-wide roll-out in November 2005. This schedule was designed so that the staff would have an opportunity to build both operational systems and staff competency by moving from easy elections to those increasingly complex, and could troubleshoot their procedures as they progressed toward the largest elections.

For a variety of reasons detailed below in this Report, these initial 'best laid plans' were not realized. Cuyahoga ended up launching its new e-voting systems on the last legally permissible date — the May 2nd federal primary election. Unfortunately, of all the elections to be managed over each four-year period, the even-year federal primary is always the most demanding, even absent any change in technology. The complexity is particularly acute for urban Ohio election administration offices. Instead of having a single ballot that largely repeats among the precincts over the county, separate ballots must be created for each major political party's primary. Further, because in this primary the political parties elect party committee representatives by precinct, each precinct presents a different race and different candidates for this one category. Thus, on May 2nd, the 1,434 Cuyahoga precincts each provided a different ballot for the Democrats, for the Republicans, and where triggered, for local issues such as school tax levies.

For the even-year primary, then, the CCBOE is responsible for creating and tabulating potentially 3 x 1,434 different ballots. Additionally, the CCBOE must construct and proof separate curbside-only (disability) ballots, optical scan absentee ballots for all precincts and all parties, plus many other ballots. Also, the CCBOE has the responsibility during these elections to check for valid voter signatures three to five times the normal number of candidate petitions. The CCBOE management load for the 'normal' even-year primary is therefore immense. By adding to this load

the stresses of launching two new electronic voting technologies — including new staff and poll worker training, new delivery and security systems, and all the new ballot preparation and tabulation systems — the CCBOE had sowed the seeds for the May 2nd election failures.

From the early morning hours of May 2nd through the certification and formal end of the election on May 20th, it was clear that the CCBOE had encountered a wide range of extremely serious problems. The first Election Day report was negative; at approximately 2:00 a.m. the election morning, Director Vu alerted the SOS and some CCBOE Board Members that the absentee ballot scanning system had failed to pass accuracy tests. Vu began to initiate processes for a hand count of the 17,000 paper ballots by temporary workers. Later in the day, while the Board was meeting in public session, reports flowed in to call centers detailing how precincts had opened late or were still closed, voting machines were not functioning, some voters were facing long lines, poll worker absences had reached exceptionally high rates, some ballots had omitted certain races, precincts lacked essential supplies, and other problems. The Board Members learned of many of these problems during their meeting, and expressed great surprise. Board Chair Bob Bennett summoned key vendors, and executives from DESI and the optical scan ballot printer appeared to answer Board Members' questions. Congresswoman Stephanie Tubbs Jones addressed the Board detailing facts she had discovered and her concerns about election planning. In the midst of this bad news, the Board chair announced that the Board would convene an independent inquiry to determine exactly what had happened, and why the difficulties, which were broad and largely unexpected, had occurred....” [CERP Final Report, pg. 5-6]

2. Avoiding a Repetition: **Criteria for Voting Technology Procurement and Implementation**

The core questions can be gleaned from the *CERP Report* and are intuitively obvious. Other criteria for choosing voting systems and scheduling the transition are less obvious but equally important to a successful deployment of new technology in elections over a series of years.

Core criteria:

- *When?* (Timing of the transition)
- *To which Vendor?*
- *To which Voting System Products?*
- *With what Costs?*
- *With what contractual protections for equipment or service failures?*

Under each of these questions lies a host of other considerations.

When? Timing of technology changes: The CERP report stated that the single worst time for initial use of a new major technology is the federal primary, which occurs in the first half of even years. The federal primary election is the most complex and challenging for almost every CCBOE department.

Staff preparation for the federal primary is intense; this is not an optimal time for careful training in new software and new technologies. A quick change might mean extensive outsourcing, which reduces rather than enhances security and accountability.

Worse, all systems for Election Day and election management must be rethought and retooled, including:

- ◆ Acceptance, IV&V, and L & A testing
- ◆ ballot creation
- ◆ ballot printing procurement and interplay with possibly new printer
- ◆ voting locations adequacy of space
- ◆ voting locations equipment, including tables and chairs
- ◆ identification and procurement of required ancillary equipment
- ◆ transportation of ancillary equipment to polling locations
- ◆ supply bags contents
- ◆ “ballot transport” to and from the polling locations, and equipment needed for secure transport
- ◆ physical and digital security systems in the CCBOE
- ◆ chains of custody and physical security procedures for paper ballots in the voting locations
- ◆ storage procedures for massive numbers of paper ballots, including during tabulation
- ◆ election official and poll worker training
- ◆ poll worker training manuals
- ◆ “pink room” ballot return procedures, sorting and prepping procedures for tabulation
- ◆ tabulation procedures
- ◆ hardware and software configuration
- ◆ staffing needs
- ◆ parking lot ballot transfers
- ◆ ballot batch tracking
- ◆ Election report configurations
- ◆ write-in vote tabulations
- ◆ early (at the CCBOE offices) “absentee” voting procedures and their ballot batch tracking
- ◆ recount procedures
- ◆ voter education
- ◆ contingency planning

Ideally, all these new procedures would be tested in smaller, local or special elections, and then reviewed, critically evaluated, and modified before a major election.

To which Vendor? The OH-SOS decides which vendors are approved for selling their voting systems in Ohio, thus far a highly circumscribed group of manufacturers with only 3 possibilities thus far. When the CCBOE originally decided to choose Diebold as its vendor, its executive staff had conducted very little research on this vendor’s election products and its track record as a company.

For instance, the CERP Panel learned that Director Vu was unaware that Diebold had only entered the election equipment business at roughly the same time as enactment of the Help America Vote Act (HAVA), or that the companies Diebold had purchased to create its Diebold Election Systems, Inc. (hereinafter *DESI*) division were almost failing companies, their products and personnel were separate brands, and had never previously worked together (much less possessed “seamless integration”). These late-discovered facts have proven to be highly relevant in understanding CCBOE’s problematic experience with this vendor.

Unfortunately, when the Board chose the DREs and Diebold, the CCBOE had not undertaken any comparative research on DESI's or other vendors' records elsewhere for:

- ◆ Effective security features
- ◆ Quality and promptness of customer service to election officials
- ◆ Accuracy and auditability test specs
- ◆ On-time deliveries of products and personnel
- ◆ Quality of equipment when deployed in actual elections, with regard to reliability/repair records, security, accuracy, accessibility, and other criteria
- ◆ Quality and ease of use of the central software used for ballot creation and tabulation
- ◆ Consistency and usability of the manuals and other documentation provided for support of the election officials, poll worker training, and voters
- ◆ Usability of the hardware devices for their intended tasks, by election officials, pollworkers and voters, and
- ◆ Comparative costs, both initially and over time.

Nor had citizen advocacy, election reform organizations, or the County Commissioners been invited to play a role in the procurement decisions. To date, as far as I can discern, citizens have not been permitted to attend the vendors' demonstrations of election equipment. Nor has a citizens' panel been established to help the Board make sound decisions in determining voting systems procurement. Given that the certification standards do not yet require vendors to test the voting systems equipment with voters and election officials, careful critical testing and collaborative discussions would seem to be useful corrective steps to ensuring wise use of taxpayer scarce monies.

To which Voting System Products?

An Ohio-approved voting systems vendor often has several different options for counties to consider. ES&S, for instance, markets two different high speed scanners. One was tested as a part of EVEREST and found to have serious deficiencies. The other, newer version was not tested by the independent academic testers and its range of security and other deficiencies are less well known. The 2002 FEC standards, under which both of these scanners were likely tested for federal qualification, have been superseded and are known for being inadequate on security and other aspects.

Ideally, the test lab reports of the VSTLs should be examined by qualified experts who can translate the findings. The exact version of the testing standards used for system qualification should be determined. It might be more prudent to wait for equipment that has been tested against the higher standards by more exacting laboratories, i.e., the new EAC regime instead of the NASED/ITA testing.

With what Costs?

Based on prior comparative cost projections, over time it has become clear that the optical scanning technology will be far less costly than DREs. But an ultra-fast changeover often reduces bargaining power and increases overall costs. The contractual terms needed may not be able to be researched fast enough and the contractual terms may suffer (see below).

Perhaps even more seriously, investing the County's or State's monies in a technology option forecloses the opportunity to look seriously at the newer generation of scanners and software that are expected to emerge in the first third of 2008. By not changing now, there may be better options available later that would suit the county's needs far better.

More careful study and consideration might show, for instance, that newer generation precinct count scanners provide the best balance between accuracy, auditability, convenience and confidence, security, reliability, and access/notice to underserved populations.

Other financial costs if making a swift change now include the possible overpurchase of the central count high speed scanners, especially if precinct count scanners are deemed a better choice for accountability and voter confidence.

With what contractual protections for equipment or service failures?

Dating to its first e-voting procurement contracts, the CCBOE has faced an array of problems owing to inadequate contractual provisions. Arguably, once cause lay in insufficient time for determining the clauses needed and negotiating these to conclusion. Warranty provisions, liquidated damages for nonperformance, inclusion of all oral and written representations on which the CCBOE desires to rely, discounts for upgrades to new versions, and other provisions can contribute tremendously to the type of vendor service the CCBOE receives from a new vendor. The provisions needed for broad protection from vendor failures and nonperformance cannot be generated in a flash. Moreover, with more time, other jurisdictions can be consulted for copies of their contractual terms. This consultation and reflection may take some time but it may avoid a repeat of numerous problems and headaches over the next several years.

I will supply a separate document with some pros and cons of various options that appear to be on the table currently, and the excerpts from the CERP Final Report.

Thank you for your attention.