



2006

Final Report of the Cuyahoga County Election Review Panel


S. Candice Hoke
Cleveland State University, s.hoke@csuohio.edu

Ronald B. Adrine

Tom J. Hayes

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Candice Hoke

Cleveland State University, shoke@law.csuohio.edu

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Cuyahoga Election Review Panel

Cuyahoga County, OH

Final Report

July 20, 2006

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Introduction

The possibilities offered by electronic voting have interested the Cuyahoga County Board of Elections (CCBOE or agency) since at least 1998. Well before any federal legislation, the agency's Board Members and executive staff began exploring vendors and technologies for possible Cuyahoga County deployment. Problems had been identified with the aging forty-year old punch card system, especially the difficulty in obtaining replacement parts. CCBOE Board Members were well aware that long range planning for replacing punch cards had to be a top priority. Demonstrations and test-runs of various voting equipment in small Cuyahoga elections educated the CCBOE on both the promises and the pitfalls of the emerging electronic voting machines. Then the 2000 presidential election occurred which underscored a range of hidden issues with Florida's — and Cuyahoga's — operative voting system. Much of Florida's difficulty lay in its lack of a statewide uniform standard for what constituted a legal vote on a punch card, *see Bush v. Gore*,¹ an issue that Ohio had previously resolved as a matter of state statutory law. But the Florida election made very visible the punch card system's aging technology, and its documented error rate averaging 2% (or higher in certain communities) — an error rate higher than the margin of victory in the 2000 presidential election — generated a public demand for greater accuracy and reliability in voting systems.

The extended national (and even international) attention to an unresolved presidential election and its ultimate conclusion by judicial order from the U.S. Supreme Court highlighted many previously hidden voting technology and election administration issues. After considering voluminous congressional Hearings, reports from governmental and civic organizations (including the U.S. Commission on Civil Rights), and competing legislative approaches, Congress passed the Help America Vote Act (HAVA) in 2002.²

The lion's share of HAVA monies has been targeted to encourage the State governments to upgrade and update their voting technologies. While no State was forced to accept the monies, HAVA mandates that any State which does so must spend the monies only on new voting technologies that comply with the Act's specifications. HAVA's standards are designed to prevent "overvotes" and "undervotes"³ by providing a voter notice at the polling place that the ballot has not been completely and correctly voted. HAVA also included a definitive launch date for any new voting systems purchased with these federal funds: no later than the first federal election of 2006. Other HAVA monies were made available to support election administration studies and improved poll worker, election

¹ 531 U.S. 98 (2000).

² To date, the federal government has spent well over \$2 billion in HAVA monies with the express purpose of improving State election systems.

³ An overvote is where a voter specifies more than the allowable number from the list of candidates running for an office. An undervote is where a voter specifies fewer than the allowable number of candidates in a race.

official, and voter education, and to create the U.S. Election Assistance Commission (EAC).

In Ohio, the Secretary of State's office (SOS) decided to accept the federal monies (over \$100 million, the third highest State allotment)⁴ and undertake the process of reviewing and approving the new voting technologies. As required by the federal legislation, the SOS published an official State Plan that discussed how the process would proceed. Unlike some other States which approved one statewide system (for instance, Georgia), the Ohio SOS permitted county Boards of Election to choose from any vendor whose voting system the SOS certified.⁵ Of the many vendors who submitted their voting systems for Ohio certification, the SOS approved only two: Election Systems and Software (ES&S) and Diebold Election Systems, Inc. (DESI).⁶ Each of these companies offered both optical scanning paper ballot and touchscreen technology, as well as ballot creation and tabulation databases.

The CCBOE hired Michael Vu as Director in 2003, at the time the Ohio SOS was involved in negotiations over which systems to approve for Ohio counties. The Ohio State Plan issued in 2003, and the SOS announced that 2005 was planned as the year all counties would roll out their new election systems. Using external legal assistance, the SOS negotiated a "Master Contract" with each of the approved vendors so that the same legal standards and protections would govern each county's acquisition and use of a particular vendor's equipment. As the year 2004 progressed, however, and Ohio received great electoral attention, the public and media increasingly challenged the security, accuracy, and verification of the invisible votes recorded on one of the new voting technologies, the DRE (Direct Recording Electronic) touchscreen. These questions culminated in the Ohio General Assembly's passage of the "Fedor Amendment." Named for Senator Teresa Fedor, this legislation required every DRE touchscreen used in Ohio elections to include a "voter verified paper audit trail" (VVPAT).⁷

To implement the Fedor Amendment, the SOS restricted the list of approved e-voting choices to optical scanners only. Use of touchscreen DREs was no longer permissible. As of January 2005, those Ohio counties that had selected the DREs as a part of their voting system, such as Cuyahoga, suddenly had to return to square one; they could choose only

⁴ Rep. Robert Ney, co-author of HAVA and chair of the U.S. House Administration Committee (charged with Federal election law supervision) at the time HAVA was enacted, stated these facts about Ohio's HAVA allocation. [Cleveland talk, 11/30/2005]

⁵ An apparent exception to this process allowed Hamilton County to adopt Hart Intercivic Optical Scanning, a vendor and system not on the statewide certification list.

⁶ With the infusion of new federal monies, the voting systems manufacturers experienced a surge of financial interest. Acquisitions and consolidation of the industry occurred swiftly. Diebold, long a leader in the automatic teller machine business, purchased two smaller voting systems companies to create its DESI division. The company lacked prior experience in the voting machinery industry.

⁷ Ohio Revised Code §3506.10(P).

between various vendors of “precinct count” optical scanners. In Cuyahoga’s case this meant that the months of investment in vendor and systems study, in pricing and service negotiations, and the comprehensive deal with DESI that was near completion, had to be scuttled.

Since the public pressure for requiring voting machine paper trails was of national proportion, the voting machine manufacturers quickly sought to adapt their DRE models with a printer unit that would comply with the new legislation. DESI was able to develop and obtain Ohio certification for its new DREs with VVPAT capacity by April 2005. Director Vu turned immediately to re-open negotiations with DESI and to move forward with purchasing from DESI the county’s HAVA-compliant voting equipment. The 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.

The Board Chair quickly moved to consult with each Board Member and to select the investigatory Panel by the week's end. Chairman Bennett stressed to each of the Panel members before any accepted the appointment that this would be a truly thorough, independent undertaking, with no attempt by him or other Board Members to interfere with or circumscribe the investigation. He invited the first appointed Panel members to draft the Panel's charge while he worked on recruiting the Panel Chair, and he did not seek to narrow the charge or the policy statement that accompanied it.⁸

The Board issued this Panel a three-part charge which has defined the scope of our work:

1. Identify the deficiencies in the Cuyahoga County elections performance occurring in the May 2, 2006 election, including problems with (a) preparation for the election, (b) the conduct of the election on May 2nd, and (c) those following the closing of the polls, including tabulating the vote.

⁸ The entire CCBOE Policy Statement can be found in the CERP Interim Report (*Appendix N of this document*); it reads in pertinent part:

We sought to conduct an error-free election. We join the voters and candidates in saying that the technical and administrative performance levels of the May 2nd election are unacceptable and cannot be repeated. We can and will dramatically improve this Board's performance in conducting elections before the next federal election scheduled for November 7, 2006. The voters of this county deserve nothing less.

We believe that this independent inquiry will generate the information that is essential for the Board to receive so that it can correct various problems that may impede citizens' rights to vote and the ability of the Board of Elections to tabulate that vote accurately.

2. Ascertain the causes and contributing factors to each aspect of deficient performance, including the technological failures, and training and administrative issues.
3. Provide a set of recommendations for remedying the deficiencies and achieving the highest standards in election administrative performance.

The Panel was informally fully constituted by Saturday, May 6th with all three Panel members having agreed to serve without compensation for the expected 60 days of work if the full Board approved the appointments. On May 17, 2006 the CCBOE Board held a Public Meeting where the Board Members formally approved the creation of the Investigatory Panel and the appointment of its three members, passing a resolution that adopted the earlier circulated Policy Statement and charge.

The Cuyahoga County Commissioners also pledged their complete assistance in funding the Panel's investigation and in supporting its charge. On May 18, 2006 the Commissioners unanimously enacted a Resolution by which the Cuyahoga Election Review Panel became the Commissioners' own investigatory entity as well as that of the Board of Elections. We understood the Commissioners' action and comments to charge us with a duty to report to them and the CCBOE Board with equal candor and alacrity — a duty we explicitly requested that they impose. The Commissioners ensured that we could expeditiously hire and equip a both a staff and office and move forward without logistical delays. Both the Board of County Commissioners and the County Administrator's Office assisted our work in every way we requested.

We quickly moved to hire predominantly law students as staff (an idea that was suggested by the two Panel members who were not law professors), posting the jobs on the student e-placement boards at the two area law schools. We solicited applications, interviewed and hired for almost all positions in roughly three days⁹. Cleveland State University allowed the Panel to occupy at favorable rates a set of offices that are slated for renovation. We considered ourselves enormously blessed to have this office space that was both empty for the 60-75 days that we needed and adjacent to the University's law library. Even before the Panel office received telephones and office equipment, staff began their work. We held an orientation meeting, developed a scope of work plan, and divided into work groups.¹⁰

The Panel members decided that the first task they would undertake personally was to interview every CCBOE staff member. Because Tom Hayes was a former CCBOE Director and had maintained friendships with several high level managers, he recused himself from all interviews of managerial level employees and Board Members. Instead,

⁹ Investigating staff included two experienced software engineers, a former Ohio auditor, a systems integration manager and others who had professional careers prior to entering law school.

¹⁰ See the Interim Panel Report for a fuller discussion of how the Panel organized itself for its work.

Hayes conducted initial interviews with all line staff. Judge Adrine and Professor Hoke interviewed all managerial employees and Board Members, conducting most of these sessions jointly. A number of these interviews lasted for several hours. Both sets of interviews educated us about the staff and managerial insights into the May 2nd planning process, and all efforts that the CCBOE had undertaken to ready itself for the election. We found a startling degree of candor and frustration, and a persistent sense, at least among managers, that major problems had not received the necessary attention to right the course of the agency. Their frustration was palpable, and their hopes for dramatic improvements in their own performance impressive and heartening.

Our Chair, Judge Ron Adrine, continued to meet his judicial docket while directing the investigation and its staff. Tom Hayes continued in his duties as the Director of the Ohio Lottery, and worked assiduously in all aspects of the investigation. Professor Candice Hoke took a temporary leave from directing the CSU Center for Election Integrity and gave up for the Panel her summer research time and funded grant so that she might devote all her time to the Panel's work.

The Final Report that follows presents for each Chapter a background overview so that the issues more fully developed in the factual Findings can be easily understood. Some of this material is extremely dense, however, but we did not seek to simplify the technical complexity if it might introduce ambiguities into the discussion. The Recommendations we offer have taken into account particular facts about Ohio election law, the County's election complexity, emerging best practices, research into election practices in other Ohio counties and nationally, and our observations. Owing to the short timetable for the investigation and writing the Report, each Chapter includes a list of additional areas for further research and consideration.

All three of the Panel members have been heavily involved in writing, reviewing, discussing and revising every word of this Final Report. We collectively stand behind it, including all of its Findings and Recommendations. Undoubtedly, the Report includes some inadvertent errors that we did not catch in the press of time and for which we apologize. With more time, we could offer an even more thorough investigation and set of recommendations, but the election calendar waits for no one. The CCBOE's November 2006 election preparation has already begun. Unquestionably, the County's elections must improve and improve quickly. We submit this Report with the earnest hope and expectation that the Boards of the CCBOE and Cuyahoga County Commission will confront the data unflinchingly, and that the CCBOE Board will mandate the significant changes that are required throughout the agency to achieve the excellence in election performance our voters deserve.

Acknowledgements

The Cuyahoga Election Review Panel (CERP, or Panel) would like to acknowledge and thank the Cuyahoga County Board of Elections (CCBOE) for prompting this initiative and the Cuyahoga County Commissioners for partnering in this project and supporting our charge. We would also like to thank Geoffrey Mearns, Dean of the Cleveland Marshall College of Law, and Jack Boyle, Vice President for Business Affairs and Finance, for their assistance in expediting the setup of our temporary offices and logistical needs. We would also like to extend a special acknowledgement and thanks to President Michael Schwartz and the staff of Cleveland State University who have graciously supported our effort.

We must note the essential assistance provided by the CCBOE managers, staff, and Board Members who sent us numerous documents, submitted to extensive interviews, and in other ways helped to facilitate this project. On behalf of the citizens of Cuyahoga County, we thank you for your efforts to improve Cuyahoga elections.

The following individuals, groups and organizations were all a part of this effort:

Commissioner Jimmy Dimora
Commissioner Tim Hagan
Commissioner Peter Lawson Jones

Congresswoman Stephanie Tubbs Jones
Congressman Dennis Kucinich
Congressman Steven LaTourette

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Joe Hall
Thad Hall
Jessica Hiner

Kathryn Hexter
Abigail Horn
Tyrone Howard
Leslye Huff
Marilyn A. Jacobcik
Doug Jones
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Election Sciences Institute

Special thanks to the over 6,000 Booth Officials, EDTs and other election workers of Cuyahoga County who make our elections possible.

Work Plan and Methodology

This investigation's scope covers the breadth of activities of the Cuyahoga County Board of Elections (CCBOE) in preparing and implementing procedures for the May 2nd election, as well as the strategies that need to be undertaken to achieve excellence in future elections.

In order to fulfill our charge entrusted to us, the Panel developed the framework that we outlined in the initial CERP project scope. *The specific areas of focus called for by that scope are specifically set forth in Appendix A.*

Due to the massive scale of a primary election in a region as populous and segmented as Cuyahoga County, it is difficult to assess and evaluate all incidences that might occur. In order to achieve the most comprehensive results, the Panel and its staff utilized a number of sources for investigating issues and developing recommendations including:

- Interviews with CCBOE personnel and recreations of processes;
- Public Hearings conducted by public officials;
- Exit polls of voters;
- Telephone interviews with voters and polling place personnel;
- Information provided by e-mail, online web forms, and other written submissions;
- Booth Official and EDT focus groups;
- Legal source materials;
- Documents provided by vendors, advocate groups, and the CCBOE;
- Interviews with relevant vendor personnel;
- Interviews with relevant government offices from the State and its Counties;
- Public Hearings conducted by the Panel, including specialized hearings with vendors and election advocacy groups.

The Panel conducted primary analysis by:

- Examination of a range of relevant documents from CCBOE administration and Election Day activities;
- Research into additional sources of corroboration for information reported by voters, poll workers, technicians, CCBOE employees, and others;
- Reconciliation of actual systems and procedures, and received equipment and materials, with those called for by contracts, directives, and the governing law.

Recommendations were developed using a multitude of resources and activities, including:

- Reviewing emerging national "Best Practices" in election administration, especially those generated by EAC/HAVA funding;
- The compilation of relevant recommendations given by CCBOE personnel, poll workers, advocacy organizations, and voters in interviews and testimony;

- Additional corrections which became apparent through the Panel's analysis and critique of expected, planned, and actual performance;
- Reviewing the successes of other jurisdictions;
- Discussions with relevant experts.

In addition to the specific areas of focus entrusted to the Cuyahoga Election Review Panel, the County retained two outside consultants for their specific expertise. The County contracted for the services of SysTest Labs, LLC to examine issues rising from the failure of the optical scan absentee ballot system, with these specific tasks:

- Evaluate absentee ballot system testing including Logic and Analysis (L&A) testing and ballot test packs;
- Evaluate IV&V testing by Secretary of State;
- Evaluate printed ballots for accuracy for all ballot styles;
- Timing marks;
- Assess alternate ballot count procedures used for unofficial and official count;
- Evaluate the absentee ballot counting system to determine reason for failure during unofficial count and assign responsibility for system failure;
- Evaluate absentee ballot system performance during February Special Election and any corrective actions.

The County contracted with Election Science Institute (ESI) for several purposes:

- Exit polling of voter satisfaction with electronic voting;
- Evaluate need for additional machines based on failure rate;
- Compare manual count with electronic vote;
- Compare memory cards to manual count;
- Review of election process for security threats.

These experts' draft and, if available, final reports form part of the data for the Panel's study and Recommendations. *See Appendix M for the report from SysTest Labs.*

Chapter I: Major Procurement for Electronic Voting

Background

In 2002, Congress passed the Help America Vote Act (HAVA) which attempted to upgrade State election systems. It provides federal funds for States and counties to replace their existing voting systems with new equipment (predominantly electronic voting technologies) so long as the new voting systems satisfy certain requirements. Distributed to State election officials, these funds could be dispersed only after the State had completed specified duties to certify vendors and voting technologies according to the State Plan they wrote. State officials, as in Ohio, could then negotiate master procurement contracts with approved election system vendors. These contracts would then apply to any county seeking an allocation under the HAVA monies. As HAVA contemplated, county election officials were permitted to select from a State-created menu of e-voting choices. State officials then would purchase the selected systems for the counties using the HAVA funds.

HAVA did not focus strictly on voting equipment but also sought to upgrade allied databases including state voter registration systems. HAVA mandated that each State create a statewide voter registration system, causing counties to have to research, purchase and install (or upgrade) voter registration software that was compatible with its State's vote registration software. After using and upgrading registration system called VEMACS for several years, CCBOE switched in 2004 to DIMSnet, a voter registration system that it purchased from Diebold Election Systems, Inc. (DESI). DIMSnet has many uses, but CCBOE used it primarily for recording voter registrations and processing petitions and absentee ballots. DIMSnet stores all voter registrations at the CCBOE, processes new registrations, assigns voters to precincts based on geographical information, and records which elections voters participate in. DIMSnet processes petitions for candidates and issues to be placed on ballots by allowing operators to verify petition signatures. The system also generates information about races.

CCBOE Director Michael Vu began investigating electronic voting technologies for Cuyahoga County soon after his appointment. In 2005, after reviewing state-certified voting technologies, the CCBOE selected Direct Recording Electronic (DRE) machines with touchscreens sold by DESI (the machine is called the AccuVote TSx) as its precinct-based electronic voting system of choice. For its absentee voting solution, CCBOE chose DESI's AccuVote OS, an optical scan voting system. Absentee voters receive a paper ballot and they vote by darkening ovals on the ballot and mailing it back to the CCBOE. The optical scan system scans the absentee ballots and records the votes. *See SysTest report, Appendix M.*

To accompany the new DREs and optical scan systems, the CCBOE selected another DESI product, the GEMS "election management system." GEMS is used for ballot creation: it organizes races and issues by precinct, lays out the ballot format which the DRE voting machines display to voters, and implements ballot rotation as required by

state law. GEMS also generates the files which define the layout of the optical scan absentee ballots. GEMS creates the DRE memory cards for an election and tabulates election results following an election.

To effectively run an election, all of these systems need to exchange data. For example, GEMS needs data from DIMSnet on candidates and races to create ballots, and GEMS uploads these “ballot definitions” to DREs via memory cards. After the election, GEMS takes the vote records data from the DREs memory cards and optical scan systems to tabulate the election results. DIMSnet needs to exchange data with the statewide voter registration database. For smaller counties, some of this data (e.g. DIMSnet to GEMS information for ballot creation) can be transferred manually, i.e. exported from one system and keyed into another system by a human operator. However, given the size and electoral complexity of Cuyahoga County, manual data transfer is not a realistic option. Efficient integration between GEMS and DIMSnet is essential for managing Cuyahoga County elections.

Long-term agreement and payment for DIMS voter registration software never executed; vendor restricted support

1.1 Finding: The CCBOE has been using DIMSnet voter registration software without a long-term contract with DESI and without any payment whatsoever for almost two years. DIMSnet was activated on 9/1/2004, and installation by DIMS staff took place during the two months prior to that date. Director Vu and Deputy Director Dillingham, and Jeff Jones and Jim Friedman of Benesch, Friedlander, who served as outside counsel in negotiating the county’s initial deal with DESI, all attest that this installation was provided by DESI, free of charge, and at DESI’s risk, as part of a total package of “seamlessly integrated” elections hardware and software. CCBOE personnel viewed the free installation as a “good faith” gesture, and as an inducement for Cuyahoga County to select DESI as its full-service e-voting vendor.

The SOS allocated HAVA monies to all Ohio counties to purchase e-voting systems through the Secretary of State Master Contracts with two vendors, DESI and ES&S. The counties only had to select their vendor and e-voting system. The CCBOE, representing the State’s largest county, wanted to use its size leverage to negotiate package deals with vendors. Their strategy was to reduce the cost of package components by tying them together in bulk buys. The first and largest of these buys was the main quantity of the DRE machines, which would be paid for by the SOS upon vendor selection. Included in a list of covered items under Schedule G of the SOS-DESI contract were 5,407 DREs, and the GEMS server, plus a specified amount of cards and ancillary equipment, all of which would also be paid for by the SOS. Voter registration software was not included in this HAVA-funded list.

The SOS allocated \$150,000 in separate HAVA money for each Ohio county Board of Elections to upgrade or implement a new voter registration system. According to Director Vu, Cuyahoga County spent these funds on hardware upgrades required by the DIMSnet system. Regarding payment for DIMSnet itself, the Director and Deputy

Director assumed that DESI would consider its selection as the County's e-voting vendor to be compensation for the installation and initial training on DIMSnet.

Because of DESI's representations of the "seamless integration" among its products, at no point did the CCBOE management regard DIMS as a company separate from DESI in any way. The Director and Deputy Director assumed that DESI's contract negotiators were speaking for its DIMS division, and that DESI as a whole was absorbing the cost of the installation and/or internally compensating its DIMS division for the work from the HAVA funds the CCBOE had released to DESI under the SOS contract. This assumption appears to have been incorrect, as the SOS contract did not purport to cover voter registration software in any way, while listing specifically all products and services its funds were paying for. As to representations by DESI about what compensation was expected for the DIMSnet installation and training, the Panel asked to interview DESI sales staff and negotiators who took part in the transaction, but DESI denied access to these individuals.

The Director and Deputy Director were openly seeking a sole-source e-voting partner in order to avoid dealing with multiple software vendors. The CCBOE had dealt with multiple vendors in the past, and wanted to eliminate the administrative complications and integration issues that such arrangements had led to. This made DESI's promise of "seamless integration" a key decision factor, and it also meant that once any part of DESI's overall system was installed, it was highly unlikely that the CCBOE would end up selecting another vendor for the rest of its needs.

The CCBOE had every intention of paying for DIMSnet, and though a price of \$160,305 per year was quoted initially, negotiations resulted in an annual fee of \$50,000 (plus the cost of inflation) for years two through seven, with the first year free of charge. Part of the reason the County was successful in negotiating the price down was that the CCBOE was also negotiating to purchase 900 additional DREs, to be paid for with county tax funds, to supplement the machines allocated under HAVA. This purchase of additional machines was intended to insure against machine failure and prevent long lines on election day. The contract listed additional "ancillary equipment" — such as extra memory cards, encoders, electrical cords and carts for the voting machines — as included in this deal, some of it for HAVA-funded voting machines and some for the additional 900. All these purchases were packaged together in a second bulk deal often referred to as the ancillary or local contract, but this deal was to be exclusively shouldered by the CCBOE via County funds.

Until September or October of 2005 (they don't remember exactly), the Director and Deputy Director had believed that the CCBOE could make this purchase on its own, without the County Commissioners' approval. According to Deputy Director Dillingham, Montgomery County had done just that to pay for its voter registration system, leading the CCBOE executives to believe they had similar sole discretion. But the County Prosecutor's office informed the CCBOE sometime during the fall of 2005 that the CCBOE lacked the legal power to sign off on any such deal. As of 7/15/2006, this contract has not been approved by the County Commissioners. Additionally, Director Vu

has never presented the DIMSnet contract to the Commissioners as a potentially separate procurement, because the negotiations with DESI had included the entire bulk purchase (ancillary equipment and additional DREs, plus the embedded DIMSnet contract), and the pricing of individual components (including DIMSnet) was assumedly dependent on the entire purchase going through.

The initial contract under which the CCBOE used DIMSnet was entitled the "Voter Registration System Limited License," which commenced 7/13/2004 and terminated 12/31/2004. It was signed by Deputy Director Dillingham and John Hice, who is identified as the Vice President/General Manager of Data Information Management Systems, Inc. (DIMS, Inc.) The first paragraph of the contract identifies it as an agreement between the CCBOE and "Data Information Management Systems, Inc., a California corporation (DIMS)." The only reference to Diebold or DESI in this agreement is on page four, where both of their addresses are listed as requiring copies of all required notices, originals of which are to be sent to the DIMS California address. The contract appears to have been written by DIMS and makes no direct reference to DIMS' ties with Diebold. Cover sheets bear the pre-acquisition DIMS logo and the primary correspondence address is in California. The second paragraph begins "DIMS designs, manufactures, sells and licenses voter registration software..." and later mentions that DIMS and the BOE are cooperating "in certain related activities." This paragraph ends by pointing out that no other oral or written agreement exists between the parties, and that these cooperative activities "should not be construed as evidence of any such agreement."

Section 3 of this agreement is titled "*Limited Scope of Agreement*" and under the subtitle "No Monetary Payment" it stipulates that "DIMS is providing the Software solely in consideration of the County's undertakings set forth in this Agreement. DIMS acknowledges and agrees that DIMS is not entitled to payment of [sic] any amounts for the County's use of the Software..." The next part of Section 3 is subtitled "No Other Obligations" and states that DIMS has no other obligations to the CCBOE under the agreement, other than allowing the CCBOE to use software delivered by DIMS during the term of the contract.

In December 2004, this Temporary License was extended until June 30, 2005, in "Limited License Amendment No. 1." No changes were made in this amendment to the provisions of Section 3, described above, so DIMSnet was still being used free of charge, and DIMS had no other obligations to the CCBOE beyond allowing the software's use. "Limited License Amendment No. 2" commenced 6/30/2005 but expired a month later, on 7/31/2005. This Amendment was identical to No. 1, in that it merely extended the terms of the original Limited License agreement for additional time. No changes were made to other terms, including the No Monetary Payment term and the No Other Obligations term.

DIMS has in some ways proceeded as though the unsigned \$50,000 agreement were operational and controlling. As soon as the first year of use had ended in July 2005, DIMS sent an invoice to the CCBOE for \$50,000 worth of annual licensing and maintenance. This CCBOE never paid this invoice because the County Commissioners

had not approved the contract. The Director and Deputy Director did not consult with counsel either regarding this invoice or the general fact that DIMS was attempting to deal with the CCBOE on its own, without the DESI negotiators who had sold the overall system (including DIMSnet) to Cuyahoga County.

Next came Amendment No. 3, executed 4/3/2006, within weeks before the May primary. This amendment similarly extended the term of the Temporary License, but it also replaced the No Monetary Payment clause with a term obligating the CCBOE to pay up to \$15,000 for the next year's usage of DIMSnet. This figure was arrived at by Director Vu, for the specific purpose of circumventing the County Commissioners' approval process and getting as much money to DIMS as the CCBOE could on its own. Director Vu inserted a sentence stating that the \$15,000 was to count toward the eventual contract price, referring to the County contract that had not yet received approval.

Apparently, the CCBOE and DIMS lacked a controlling agreement to cover the period of 7/31/2005 to 4/3/2006. Under the original Limited License Agreement and Amendments No. 1 & 2, which collectively ended 7/31/2005, DIMS had no right to demand compensation for the software and the CCBOE had no right to demand training or support services, unless such was provided for in another agreement. [DESI hearing, conference call with DIMS staff 7/7/2006, interviews with Director Vu and Deputy Director Dillingham 7/14/2006, conference call with Benesch Friedlander law firm 7/14/2006, examination of Temporary License Agreements]

1.2 Recommendation: The CCBOE should involve legal counsel in all stages of all negotiations with major suppliers and their subsidiaries. More attention should be paid to implied and explicit quid pro quos, and to the specific corporate entity on the other side of the contract. The CCBOE should never assume that one entity's negotiator is speaking for another, or that corporate units or subsidiaries are as "seamlessly integrated" as prospective vendors may claim. If the CCBOE receives any product or service without a written contract or during negotiations for one, it should be considered an open issue that needs to be resolved quickly. All purchases should be memorialized on and tied to a CCBOE purchase order, regardless of how the transactions are negotiated, so that a clear paper trail is formed regarding what has been bought, what the price really is, and what the terms are. All incoming invoices should be matched to purchase orders, and if they cannot be, this should be seen as a "red flag" requiring immediate investigation. Further, although it may be seen as an extra and perhaps unnecessary expense, legal counsel for the County and CCBOE should draft the terms of the CCBOE's major acquisition contracts, rather than rely primarily on Sellers' form contracts or suppliers' boilerplate. This extra legal step is essential to protect the interests of the voters and taxpayers of Cuyahoga County.

1.3 Recommendation: The CCBOE should present the proposed DIMSnet contract to the County Commissioners as a separate deal from the other purchases with which it has previously been bundled with. This would allow the Commissioners to evaluate it on its own merits.

1.4 Recommendation: Bundling a variety of products for purchase is a strategy that can benefit a Seller as well as one that Buyers can use profitably. But bundling necessary products along with those that are optional (but desired) as a strategy to compel a reviewing agency to fund the entire bundle without closely examining its products is a risky approach that can result in the CCBOE not receiving any portion of the sought products. Full disclosure is the best course. CCBOE executive managers need to demonstrate respect for the role elected County representatives have in protecting the public purse and not seek to force approval of deals automatically.

Lack of integration between DIMSnet and GEMS software

1.5 Finding: The “seamless integration” described by DESI sales representatives and printed materials did not materialize because the system purchased from DESI by the CCBOE was not set up or managed to perform as such. At the Panel’s 6/29/2006 Public Hearing, DESI representative Jessica Hiner, who had been in charge of project implementation in Cuyahoga County for DESI, stated that in order to seamlessly integrate, the DIMSnet and GEMS systems “need to be set up in such a way so that they can do that, because DIMS is designed to work with multiple election management systems. I’m not a DIMS person, but you would have to set it up in such a way so that it will do that.” When asked how they were set up in Cuyahoga County, Hiner replied, “I do not know how DIMS is set up in Cuyahoga. I can find out.” DESI assigned Hiner to manage all Ohio implementations, and DESI did not assign a Project Manager within DESI to Cuyahoga County in particular. All on-site implementation management appears to have been subcontracted by DESI to a third party company, Sogeti USA. When asked what would have needed to happen to realize the “seamless integration” that the CCBOE came out of negotiations expecting, Hiner stated that “DIMS is not within the scope of what my responsibilities are and it predates my responsibilities in terms of the voting systems in Ohio.” Later in the Hearing, in response to a question about additional purchases that may have been needed to complete the integration, Hiner replied, “I know I’ve had a few conversations to that regard. I don’t know that I’m the one that’s had all the conversations.” Since Hiner was the only DESI employee assigned to Cuyahoga County to run the implementation of the voting system, she presumably needed to know how her company’s products operated and what versions were in play on a given project. Without that knowledge she could not have scheduled the implementation effectively.

E-mail evidence suggests that Hiner was aware in advance of the difficulty the CCBOE would encounter in the DIMSnet-GEMS data transfer. Joe Nista, a Sogeti USA employee who was subcontracted to work under Hiner as DESI’s on-site implementation leader, copied her on a 2/7/2006 email to Director Vu and Deputy Director Dillingham entitled “Conference Call with Diebold on DIMS-GEMS,” where he stated that “(i)t does not appear that we will be able to export candidate info from DIMS to GEMS very quickly and Diebold recommends that the Cuyahoga team begin to load race, candidate, issue information directly to GEMS asap.” It is unclear who from DESI recommended this manual data entry. If it was not Hiner who did so, it is unclear why it was not Hiner and even more unclear how she ended up unaware of the issue. It is also unclear how this issue was not within her responsibility as Project Manager, especially given that her

subordinate was reporting to her about it. Hiner stated in a 7/17/2006 conference call that her responsibilities were limited to implementation of the State Master Contract, which did not include DIMSnet. However, that contract in note 9 on page B-2 states that “Diebold will provide whatever support is necessary to ensure the first successful federal election.”

When asked at the Hearing whether her work included the DIMSnet-GEMS interface, Hiner replied that since the scope of her position was only to implement the State Master Contract, and since she was also in charge of areas which did not use both DESI-produced systems, and since the SOS mandated that tabulation systems not require interface to a particular voter registration system, and since DESI can’t possibly know how every registration system works, she therefore trains every county to do manual entry into GEMS. This stated policy would seemingly thwart any possibility of “seamless integration” simply by not attempting it at all, regardless of whether both DESI products were used.

DESI’s counsel, who was also present at the hearing, told the Panel that DIMSnet and GEMS were purchased with two entirely separate contracts, and pointed out that the DIMSnet contract had not been finalized or performed on by the County. He then referred questions regarding “seamless integration” back to the CCBOE. It appears, however, that the CCBOE did not need to finalize or perform any contract with any DESI subsidiary to be entitled to “whatever support is necessary to ensure the first successful federal election.” These services had already been paid for in the state contract.

Having two contracts was not the CCBOE’s idea; it was an automatic reality because the SOS Master Contract covered GEMS but not DIMSnet. Acquiring both systems from the same vendor was the CCBOE’s idea, but “seamless integration” among DESI’s voter registration and election management products was DESI’s open, written, and frequently stated claim during the CCBOE’s vendor selection process. The CCBOE could have obtained two separate systems under two separate contracts from any of several vendors, but the CCBOE wanted an integrated system from one vendor, and this was the reason the CCBOE selected DESI.

According to DIMS staff and Tyrone Howard, the Sogeti USA in-house technical support assistant subcontracted by DESI to work at the CCBOE, certain software products, primarily VC Programmer, were not used during the data transfer from DIMSnet to GEMS and would have smoothed the process tremendously. Director Vu is less convinced that the VC Programmer package would have helped this process in any great capacity. Vu views it as more of a specific application to activate the Ballot-on-Demand feature of the overall DESI product package. However, Director Vu also stated that DESI Sales Manager Barry Herron was unclear as to what VC Programmer did or how it worked.

Ballot-on-Demand was not used in the 5/2/2006 election. DESI marketing materials noted that the Ballot-on-Demand system was included with the purchase of DIMSnet, without mentioning VC Programmer. But according to Vu this supposedly free feature

was not useable at all without the purchase of the \$5,000 VC Programmer module, \$1,200 worth of VC Programmer training, and several \$150 ST-100 universal encoders. In a 7/17/2006 conference call, Hiner stated that VC Programmer was intended to work with multiple voter registration systems from multiple vendors, and was not necessary to use Ballot-on-Demand.

The CCBOE did purchase the VC Programmer software, but has not yet purchased the VC Programmer training session that was quoted to Director Vu. In his view, VC Programmer would only have helped with GEMS-DIMSnet data transfer that was needed to use Ballot-on-Demand. On a conference call with the Panel, DIMS staff indicated that the VC Programmer training session also included information about the DIMSnet-GEMS data transfer process. Vu believed that the DIMSnet-GEMS transfer, which VC Programmer may have eased, was a feature the CCBOE was already entitled to because that was what DESI had offered upfront as a competitive advantage of their package. According to Vu, this “seamless integration” of DIMSnet to GEMS was promised as a fundamental feature, and at no time did anyone from DESI tell him that additional software or service purchases would have to be made to realize this benefit. The “seamless integration” was proposed to him not as a set of items to purchase, but as a reason to select DESI over other vendors.

Sogeti employee Howard stated that he and Nista, also from Sogeti, had asked for DIMSnet support several times during the difficult data transfer process of February and March 2006. Though some support was provided over email, it was limited, and no DIMS staff was ever on site to help with the data transfer. According to Howard, Tim Murawski of DIMS told him in an email that DIMS was dealing with another large client at that time, and that his supervisors had told him not to support Cuyahoga County because of the lack of payment and lack of a long-term contract. Howard was reluctant to provide the Panel with full access to his emails because of the confidentiality agreement he and his employer have with DESI. Joe Nista, though out of the Cleveland area at this time, was personally willing to share information with the Panel pending DESI approval, but DESI did not grant this approval. [Diebold-SOS Master Contract; Interviews with Tyrone Howard 7/13/2006 and 7/14/2006; interviews with Director Vu and Deputy Director Dillingham 7/14/2006; examination of DESI promotional materials and letters to the CCBOE; conference calls with DIMS staff 7/7/2006 and with Jessica Hiner 7/17/2006; Public Hearing 6/29/2006; email from Joe Nista to Director Vu and Deputy Director Dillingham 2/7/2006; Nista’s progress status reports; email requests to Nista and his responses]

1.6 Recommendation: The CCBOE should hold a public forum and invite the DESI sales representatives who convinced them to select DESI systems. DESI’s Hiner and other DESI management in charge of implementation for Cuyahoga County should be specifically invited. At this forum, the CCBOE could ask these representatives to explain how their assertions of a “seamless integration” among their products were reflected in the performance of those products leading up to the May primary, and why Diebold’s implementation plans for Cuyahoga County scarcely addressed, and did not achieve, the “seamless integration” advertised during vendor selection. The DESI representatives

might suggest and quote additional purchases that are necessary to complete the seamlessly integrated package they spoke of in 2003-2004. (The Panel held a Public Hearing and requested the presence of DESI sales staff to speak regarding these issues. Given their absence, it then requested phone or email conversations with these individuals, but DESI denied all forms of access to or communication with these individuals.)

1.7 Recommendation: In future implementations, including whatever needs to be done to make the County's systems fully operational and integrated for the November election, the CCBOE should insist that Project Managers assigned by vendors to Cuyahoga County are aware of all expected outcomes and charged with achieving them in their project plans. The CCBOE should keep lines of communications open between those who sold them the product and those who deliver it to insure that all features used as selling points are realized. Project Managers should also be aware of the product requirements of the projects they are managing and the configurations of their own company's products that are used in these projects. The CCBOE should demand that subcontractors used by vendors to implement CCBOE purchases also be aware of expected outcomes, and that they receive the full cooperation of the vendors that hired them.

Needs for training, and issues with regard to payment for training, on DIMSnet and GEMS software

1.8 Finding: The DIMS-produced "Project Quality Plan of DIMS VR Implementation for Cuyahoga County" revision 1.6, 6/29/2004, lists on page 10 a DIMS training team of four people. In the Work Plan chart on pages 16-17, User/Admin Training is the only one of 42 events to have "N/A" instead of a date listed for start and end. Election Training is the only event to have been shortened, with its end date changed from 9/2/2004 to 8/28/2004. Under "Targets" on page 17, the date for "Training Complete" was similarly tightened.

In December 2005, Deputy Director Dillingham requested that DIMS complete the CCBOE's training on all DIMSnet modules. Tim Murawski of DIMS replied with a price quote. The Panel has not seen this price quote, but Murawski referred to it as being an attachment to the 12/28/2005 email. He further stated that the training could only begin once the contract and payment issues could be resolved.

Deputy Director Dillingham replied that training on the Candidate and Absentee modules had not been provided when the system was installed in 2004. She asked how the CCBOE could be charged for this training when the modules in question were not available for use in Ohio at that time.

Ross Underwood of DIMS responded that once a year had passed after installation, all training would be at an additional charge. He asked Dillingham what training she thought CCBOE had not gotten initially, and ended the email with a request for payment under the proposed contract that had not been executed, including use to date and past

services rendered, the former of which had explicitly been provided at no charge under the Temporary License Agreement and Amendments thereof.

Deputy Director Dillingham replied that DIMS never gave the CCBOE any documentation regarding training done or yet to be done. She asked how DIMS could have provided training initially “on modules that did not work when they were installed.” She listed Elections, Candidates, ballot ordering, and election calendar as some of the areas in which the CCBOE staff had not been trained. She responded to the demand for money by stating that “I feel that information should be coming to you from Diebold and not the Board of Elections.” There was no sense at the CCBOE that DIMS was in any way separate from DESI, that they were different negotiating units, or that they expected separate revenue streams. Dillingham closed with “(w)e were told that we would be able to pull the information from DIMS into GEMS to create our ballots, how can we import/export data if we were never taught how to input the data in the first place?”

Underwood responded “(i)t sounds like you need more training than we realized at first.” He then listed items that would be added to the price quote, and indicated that the classes would have to be scheduled soon because they were in such high demand. Dillingham again asked why the CCBOE had to pay for training they should have received in the first place, and Underwood responded by explaining the DIMS policy of charging after one year, for budget and practical purposes, then pointed out that King County, Washington implemented the system at a similar time to Cuyahoga, then bought an additional \$35,000 worth of training from DIMS.

At the Secretary of State conference in January 2006, Director Vu asked Ross Underwood of DIMS about the missed training, as well as DIMSnet-GEMS integration training. Vu followed up this request with a 1/18/2006 email to Underwood asking that Tim Murawski come and provide training “to bridge the gap between DIMS and GEMS.” Underwood replied that this would happen, but only should happen after the in-house GEMS training. He stated that he wanted to make sure Murawski was involved, “so that he can support the procedures after the training has been concluded.” Director Vu then sent another email to Underwood on 1/30/2006 asking “(i)s it possible to get someone scheduled for DIMS/GEMS training for this week or next, as discussed?”

This training never occurred. The DIMS-GEMS data transferal process became a critical bottleneck that delayed L&A testing and wasted valuable CCBOE resources when they were needed most. Given that the state contract, which allocated millions in federal dollars to Diebold, required Diebold to “provide whatever support is necessary to ensure the first successful federal election,” it is unclear how any necessary data transferal support could have rightfully been withheld over a \$50,000 county billing issue. The state contract did not pay for DIMSnet itself, but it paid for support during the first federal election in which Diebold’s products would be used.

Tyrone Howard stated that he and Joe Nista had created a GEMS training class to present at the CCBOE in January or February 2006. According to Howard, Joyce Sellers of the CCBOE said that the class would not be needed. Director Vu subsequently stated

in an interview that he had never heard of this proposed class or this exchange between Howard and Sellers. [Diebold-SOS Master Contract; interviews with Tyrone Howard 7/13/2006 and 7/14/2006; interviews with Director Vu and Deputy Director Dillingham 7/14/2006; emails between Deputy Director Dillingham, Tim Murawski, and Ross Underwood 12/28/2005-12/29/2005; conference call with DIMS staff 7/7/2006; Public Hearing 6/29/2006; email Director Vu to Underwood 1/30/2005; Project Quality Plan of DIMS VR Implementation for Cuyahoga County, Revision 1.6]

1.9 Recommendation: The CCBOE needs to resolve the contract situation with DIMS, as it appears to have been the primary roadblock preventing integration training and, as a consequence, data transferal between the systems. As for what training should have been provided at the time of installation, this should be taken up with DESI and not DIMS. It is unlikely that DIMS staff began the installation spontaneously, without any prompting from within the DESI organization, or that DIMS staff took no part in the negotiations that landed their product in the CCBOE computers in 2004. These negotiations were with regard to the state contract, which provided for necessary support services in the first federal election held using Diebold systems. DIMS is part of Diebold, and arguably should be obligated under agreements made by Diebold. No contract, neither the proposed but unsigned county procurement nor the Temporary License, provided for any compensation for DIMS products or services during the first year of use, which included the installation and training period. In-house GEMS training should be prepared and scheduled to begin as soon as possible.

SOS Master Contract did not provide for ancillary equipment

1.10 Finding: The Secretary of State's (SOS) Office and DESI signed a Master State contract on 7/14/2004, under which the SOS's office purchased DESI touchscreen systems for electronic voting. The contract provided for the purchase of Direct Recording Electronic (DRE) systems. However, the machines themselves, as initially agreed upon in the contract, are not sufficient: the conversion requires the purchase of many items of additional "ancillary" equipment that are not provided under the Secretary of State's contract. For example, extension cords are required to ensure that the electronic voting machines are fully charged on Election Day. Other ancillary equipment is optional, but very helpful. For instance, DRE carts with adequate locks are useful for firmly securing and transporting the voting machines before they go into use. [SOS-Diebold Master Contract; interviews with Director Vu and Manager Gorman]

1.11 Finding: Procurement and Operations Manager Gorman stated that CCBOE employees spent roughly 60 hours researching vendors for ancillary equipment that later turned out to be DESI "sole sourced" items. [Interview with Gorman]

1.12 Finding: The Secretary of State's Master Contract omitted provisions and funding for the purchase of equipment other than that specified in the contract—even if the county in question considered the equipment imperative for its use of the e-voting system. This omission was one cause of the confusion and conflict between DESI and the CCBOE concerning the responsibilities each shouldered for that equipment. [SOS-

Diebold Master Contract; interview with Fiscal Services Manager Durkin 6/12/2006;
Secretary of State re contract; Procurement Operations spreadsheets]

1.13 Finding: The Secretary of State's contract contained relatively few details about how the conversion to electronic voting would occur, and the ambiguities on points such as consulting services placed the onus on the counties to research and plan the conversion to electronic voting. That was a heavy burden in light of the lack of prior experience with e-voting, and the lack of expertise in crucial matters such as security systems for the machines.

1.14 Recommendation: When negotiating e-voting Master Contracts with vendors, or any revisions to the contract which governs currently, the Secretary of State should provide information concerning ancillary equipment needed for an e-voting system. The Master Contract should state in a Schedule or other attachment:

1. a list of all *necessary* items for the designated electronic voting machine to function (both alone and in a system with other machines) but not included in the Master Contract list of products and services, with sufficient information concerning the quantities of items needed;
2. a list of all optional items that might be helpful in the conversion to electronic voting;
3. the exact specifications of all items that are not sole source listed in 1 or 2 above;
4. reasonable deadlines for supplying all necessary, and especially "sole source," equipment, with specified penalties for not meeting these timetables;
5. if possible, maximum prices that can be charged for the necessary ancillary equipment.

This information is critical for local governments and Boards of Elections so that they may pursue procurement in a timely and cost-effective manner, with maximum leverage for purchases. These requirements would help to level the playing field between the counties and the voting machine system vendors, and would impose clear duties and penalties on the vendors for strategic behavior that unfairly undermines the public's ability to have its voting systems functional and reasonably cost-efficient.

Combined procurement of required ancillary equipment with additional voting machines; CCBOE relationship with County Commissioners

1.15 Finding: On November 14, 2005 the CCBOE signed a purchase order from the Secretary of State's office that provided Cuyahoga County with 5,407 DESI voting machines. The CCBOE managers also sought an additional contract approval from the Cuyahoga County Commissioners that would authorize local funds for the CCBOE to purchase 900 additional electronic voting machines, along with ancillary equipment that would facilitate the operation of all 6,307 electronic voting machines. The negotiation of this "bundling" deal had occurred over the critical summer months and well into the fall. Because of their emphasis on the importance of the extra DRE units to be purchased locally, the CCBOE executive managers did not move forward quickly after the April

SOS re-certification of the DREs to sign the purchase order for the HAVA-funded, Master Contract authorized e-voting system the CCBOE had selected. By delaying and focusing on the extra DREs, the CCBOE was not able to obtain the system in time for the CCBOE to begin using the new e-voting system in small 2005 elections. The Director and Deputy Director said they did not sign the purchase order with the SOS in order to retain “leverage” for negotiating the ancillary equipment and additional DRE contract, and so they could negotiate higher performance standards. [SOS-Diebold Master Contract; Proposed November 2005 Agreement between CCBOE and DESI; Interviews with the Director and Deputy Dir.; with CCBOE Board Members; with David Lambert, attorney for Cuyahoga County Commissioners; Letter to Director Vu from DESI’s David Byrd, describing the supplementary discounts on voter registration and additional equipment that will accompany the purchase of 900 additional voting units]

1.16 Finding: The CCBOE Director and Deputy Director stated to the Panel that they believed that “soon” after the 11/14/2005 date when they signed the Master Contract purchase order, the agency would receive the Board of County Commissioners’ (BOCC) authorization to purchase 900 additional electronic voting machines, along with ancillary equipment that would facilitate the operation of all 6,307 electronic voting machines. But the Panel finds no reasonable basis for this belief. Several weeks before signing the Master Contract purchase order, the Director and Deputy had received concrete, reliable information that the County would not approve the proposed contract for additional DREs before the DREs had established a performance track record.

In October 2005, hoping to persuade the Commissioners that the extra voting units and ancillary equipment were needed and should receive County funding, CCBOE Board Member Loree Soggs discussed with Commissioner Jimmie Dimora the CCBOE’s request for the County Commissioners to approve the proposed contract. Mr. Soggs told the Panel that Commissioner Dimora was crystal clear that the Commissioners would not be approving the proposed contract that sought to “bundle” the 900 additional DRE units with essential and optional equipment for launching the e-voting system. Mr. Soggs reported back to the CCBOE Board Members, and to the Director and Deputy Director, that the proposed contract would not receive the Commissioners’ approval. Mr. Soggs recalled that Mr. Dimora had stated that the County wanted to be prudent with the taxpayers’ monies and that the Commissioners were not convinced that any additional DREs were needed. He said that the Commissioners would take another look at the CCBOE request for more machines after the DREs were used in an election, and thus had a track record.

Mr. Soggs also reported back that the Commissioners were not impressed with the bundling of ancillary equipment with the requested additional DRE units, even though the CCBOE management had obtained \$1.5 million in discounts from list prices. If the additional DREs were not needed or did not function well in an actual election, Mr. Dimora stressed, the \$1.5 million in negotiated contract discounts could not offset the overall cost of the contract (approximately \$4.3 million). [Proposed November 2005 Agreement between CCBOE and DESI; Interviews with the Director and Deputy Dir.; with CCBOE Board Members; with David Lambert, attorney for Cuyahoga County

Commissioners; Letter to Director Vu from DESI's David Byrd, describing the supplementary discounts on voter registration and additional equipment that will accompany the purchase of 900 additional voting units]

1.17 Finding: The Director and Deputy Director did not accept and act on the information that CCBOE Board Member Soggs related, and so did not attempt to move forward expeditiously on the ancillary equipment needed for the e-voting system launch. Instead, for several additional months, they continued to try to convince the County Commissioners of their wisdom in “bundling” the items, arguing that the Commissioners should approve the side deal they had negotiated with Diebold. This delay and attempt to pressure the Commissioners also meant that the CCBOE managers did not launch the e-voting system in any of the fall 2005 elections, though many other Ohio counties were able to do so. Some other counties, including some using Diebold DREs, were able to complete all negotiations for ancillary equipment and meet the highly preferred 2005 timetable for launching the systems. When the Panel asked Director Vu why Cuyahoga took so much longer than the other counties that also had to acquire ancillary equipment information and negotiate deals directly with Diebold, he said that Cuyahoga's size and complexity made the amount of extra and necessary ancillary equipment more difficult to research and obtain. [Proposed November 2005 Agreement between CCBOE and DESI; Interviews with the Director and Deputy Director]

1.18 Finding: When the County Commissioners rejected the acquisition of 900 additional machines, the CCBOE Director and Deputy Director maintained that they pushed the County Commissioners to purchase the ancillary equipment needed for the 5,407 machines allocated in the Secretary of State's contract. [Telephone Interview with Director Vu, July 13, 2006] However, there is no written documentation or other verification to confirm this. According to Dennis Madden, the County Commissioners never had an opportunity to consider buying solely the ancillary equipment. [Interview with Dennis Madden — County Administrator for the Board of the County Commissioners]

1.19 Finding: The CCBOE erred in combining the purchase of 900 additional DRE e-voting machines and the purchase of ancillary equipment for *all DREs* — those purchased under the Master Contract with federal funds and those sought to be funded by the County. Some ancillary equipment was essential for the 5,407 voting machines purchased under the auspices of the SOS's office, regardless whether the 900 additional machines were purchased. This error introduced additional delays into the procurement of essential equipment. For example, DRE carts, known as TSx carts, were originally part of the November proposed agreement, but after the agreement was rejected by the County the carts were not ordered until 2/9/2006. Though the carts were needed by 4/14/2006, it was projected to take 10-12 weeks to deliver them to the CCBOE. As a result, DESI agreed to try to provide TSx carts for the May 2nd primary, but insisted that it not be liable if carts were not delivered for use before the May election. This term became part of the single source items contract. Not surprisingly, many carts were not delivered before May, and are arriving only now in July 2006. [November 2005 Agreement

between CCBOE and DESI; February 2nd email between DESI Consultant Joe Nista and Fiscal Services Manager Durkin; TSx carts contract; Interview with Director Vu]

1.20 Finding: By focusing on the local “bundled” contract, and not accepting the heads-up from the Commissioners that additional DREs would not be approved, the CCBOE was unable to launch the e-voting system prior to the May even-year primary. This mistaken set of priorities may have been the root cause of the launch difficulties. Had the CCBOE set a firm commitment for launch in one of the small Fall elections (and certainly no later than November 2005), and negotiated with Diebold with that commitment clearly governing their agency’s actions, the CCBOE would not have had to combine the immense management issues of the “normal” even-year primary with those of the e-voting launch. It would have had the opportunity to trouble-shoot its processes, as originally planned, and by May 2006, may have been able to have handled all the tasks with reasonable competency.

1.21 Finding: Even with the delays the CCBOE experienced in negotiating the proposed local contract, had the Director and Deputy (upon learning of Mr. Soggs conversation with Mr. Dimora) promptly separated ancillary equipment from the additional DREs and presented that revised contract to the County, the agency would have retained more leverage for pricing and better delivery schedules than the CCBOE was able to garner in March-April 2006. The likelihood of delivery before the May 2nd Primary Election would have been substantially increased. The irony and two-way high stakes poker played by the CCBOE Managers do not escape us: by holding out for the items and pricing that they sought, the agency ultimately paid more for the ancillary equipment and on a worse delivery schedule, and still were not able to induce the County Commissioners to purchase more DREs.

1.22 Recommendation: The relationship between the County Commissioners and the CCBOE needs to improve. The CCBOE should have sought to involve the County voters’ elected representatives in the voting machinery choices from the outset, instead of sidelining them until the last moment and then expecting them to pay the bills for whatever e-voting system the CCBOE executives had selected for purchase. A working agreement for how the two County agencies will jointly implement the duties imposed under §3506.03 of the Ohio Revised Code (which explains how voting equipment can be acquired) would be useful. The CCBOE and the County Commissioners should outline a clear policy and procedure regarding decision-making in voting machinery funding and procurement.

1.23 Finding: The CCBOE executives have incited the County Commissioners to develop mistrust and skepticism towards the CCBOE by not briefing the Commissioners in a timely and complete manner on what would need to be purchased to complement the Secretary of State’s Master Contract. [Interview with Dennis Madden]

1.24 Recommendation: When the Board of County Commissioners requests information from an agency to plan its budget, an agency such as the CCBOE should do

its best to assist the County Commissioners rather than to criticize inquiries. [Deputy Director Dillingham email to Sandy Turk]

Inefficient procurement procedures for ancillary equipment

1.25 Finding: In addition to its sole source purchase orders with DESI, the CCBOE ordered the rest of its ancillary equipment primarily through:

- Sole source purchase orders from other companies;
- Direct orders for amounts involved were less than \$1,000;
- Informal purchase orders between \$1,000 and \$14,999;
- Formal purchase orders greater than \$15,000

After DESI sent notices to the CCBOE indicating the desired items were sole source items and the Cuyahoga County Prosecutor issued his approval, the CCBOE placed sole source orders.

The bulk of the ancillary equipment ordered by the CCBOE was delivered in time for the May 2nd Election, but the procurement process itself was flawed and inefficient. On several occasions the Implementation Teams responsible for researching and recommending ancillary equipment failed to submit completed requisition forms to the Procurement and Operations Department managed by Brendan Gorman. The Ballot Department, for example, failed to submit a complete requisition form to obtain special size calculator rolls for optical scan printers; the Election Support Department failed to submit a complete requisition form for the luggage tags that are part of the precinct binders; and the Candidate & Voter Services Department failed to submit a proper request for certified mail envelopes. Altogether, four departments submitted 15 incorrect request forms.

When someone filled out a requisition form incorrectly, a member of the procurement office had to either track down the “culprit” and ask that the order be resubmitted, or attempt to fill out the order correctly him/herself. Due to the influx of purchase orders to Procurement, it often took significant time to correct improper requisition forms. Rather than tackling pressing matters relating to the May 2nd Election, CCBOE managers’ time was wasted dealing with procurement. [November 2005 Agreement between CCBOE and DESI; February 2nd email between DESI Consultant Joe Nista and Fiscal Services Manager Durkin; TSx carts contract; Interview with Director Vu; Interview with Administrative Services Administrator Platten, 6/20/2006; Procurement and Operation Manager Brendan Gorman Interview 6/24/2006; Purchase Order List Year 2006, revised 5/26/2006]

1.26 Recommendation: The E-Voting Implementation Team process was not thoughtfully planned or managed, and this hampered procurement. Far better procurement planning must occur with procedures well-designed to consume little time of those outside the procurement office. Researching other counties’ experiences should have occurred promptly rather than the CCBOE “reinventing the wheel” itself. The

CCBOE should explore using electronic forms for requisitions and procurement software that automates the process. Some software is designed to identify errors and thus can reduce time spent on purchase orders.

DESI failure to specify required ancillary equipment, sole source issues

1.27 Finding: The CCBOE executive managers have expressed dissatisfaction with DESI's approach and delivery of ancillary equipment. It has complained that DESI does not send sole source letters — letters representing that DESI is the sole source of supply for a given piece of equipment—in a timely fashion. On 3/20/2006 Director Vu requested sole source letters for “any item that is necessary for use of the TSx Voting System including: [sic] paper canisters & spindles, paper rolls, memory cards, & O/S memory cards, and VIBS kit.” Later that day, Administrative Services Administrator Platten listed other items she believed were sole source because CCBOE officials had “exhausted all resources for these items.” Those items included supervisor cards, TSx Batteries, and privacy shields.

When the CCBOE signed the purchase order from the Secretary of State's Office on November 14, 2005 to order 5,407 TSx touch-screen voting machines, DESI knew what additional items that were essential for using the DRE machines, and knew which of those items the CCBOE could obtain from other vendors.

1.28 Recommendation: Given the importance of voting machines to the proper functioning of the electoral process that lies at the core of our representative government, leaders at the local, state, and federal levels should work together to craft uniform, stringent regulations for vendors who provide electronic voting systems. The regulations should communicate expectations clearly and impose responsibility and accountability on vendors.

1.29 Recommendation: The CCBOE should not bid for ancillary equipment without determining the range of possible sources for the equipment and its pricing. A vendor's sole source letters should be sought promptly, even before a contract is signed, as a condition for the CCBOE executing the deal. To help determine what is a sole source item, the CCBOE should seek advice from other jurisdictions that procured equipment from that vendor.

1.30 Recommendation: The Secretary of State's office should create an electronic bulletin board that Ohio county BOEs can use to share information about vendors of voting equipment, pricing and performance, solving various problems, etc., sorted by types of equipment and vendor. The SOS should monitor the postings and assist BOEs with subpar vendor performance. It should consider legal action where vendors have not performed.

1.31 Recommendation: The CCBOE must establish more efficient interaction between the staff procuring equipment and the management personnel seeking sole source letters. It is highly inefficient to have CCBOE employees calling vendors about ancillary

equipment before sole source items (and letters) have been determined. Much valuable time was wasted. At worst, the CCBOE would have bought more items from DESI at a somewhat higher price, but the CCBOE managers would then have been able to focus on other pressing issues related to the May Election.

CCBOE difficulty in accounting for delivered items

1.32 Finding: On at least one occasion the CCBOE acquired ancillary equipment and had difficulty accounting for it. On 6/2/2006, Fiscal Services Manager Durkin received a reminder requesting payment for extension cords, roughly three months after the initial invoice had been sent. Assistant Manager of the Candidate and Voting Services Department, Joseph Dennis, insisted that the extension cords had been returned to the appropriate vendor. Seventeen days and several emails later, Dennis conceded. “Good morning, Lisa. We had the cords. They did not go back as they should have. I’m sending them over to Dan [Trif] this morning to be shipped back. Sorry for the mix up.” [Email to Fiscal Services Manager Lisa Durkin, 6/2/2006; Subject: Grainger Invoice #90497551804 \$93.40; Email, Assistant Manager of the Candidate and Voting Services Department Joseph Dennis to Fiscal Services Manager Durkin, 6/19/2006, Subject: Extension Cords]

1.33 Recommendation: A central, readily-accessible electronic system that monitors and accounts for all purchases, arrivals, and returns of equipment should be established. That system should include all transactions between the CCBOE and other vendors.

Chapter II: System Functionality: Essential Databases and E-Voting Technologies

Voters see and interact with DRE touchscreen voting machines in their polling places, but Cuyahoga County's conversion to electronic voting included two key systems installed at the CCBOE, as well as additional equipment required for the operation of the DREs. This Chapter describes functionality and other issues with these components which affected the preparation and conduct of the May 2nd election.

DIMSnet Voter Registration System

Voter registrations lost from the CCBOE system

2.1 Finding: The DIMSnet voter registration system has dropped or displaced several hundred registered voters. This has occurred ever since the transition from the previous voter registration system, VEMACS, and it continues to occur regularly. There are two known explanations for this problem. Voters can disappear due to the "Merge Records" feature in DIMSnet. This feature allows a DIMSnet operator to combine two registration records into a single record and is primarily used to resolve duplicate registration records that correspond to a single voter. However, if an operator inadvertently or mistakenly merges records of different voters, one or both of these voters may be deleted. The problem is that DIMSnet does not permit the maintenance of an archive of voter records that have been merged. Once two voters are merged into one record the process cannot be reversed and some information will be lost. Additionally, DIMSnet includes no warning prompt or safeguard to alert an operator that a registration record is being deleted. Even a prompt as simple as "Are you sure you want to merge records? Sensitive information may be lost," would alleviate much of this problem.

Voters can also be displaced by placement in "fatal pending" status. Voters will be categorized as "fatal pending" when the address they have registered under does not exist, or the voter cannot be located due to an address change. These voters essentially disappear from the system once they are placed in the "fatal pending" category because they cannot be contacted to correct their registration information.

The conclusion that voters mysteriously disappeared from the system without explanation is further supported by the fact that EDT and Booth official employees disappeared from the DIMSnet payroll system. The disappearance of this information from the DIMSnet payroll system cannot be explained by the "fatal pending" or merge records explanations because there is no reason to believe that anyone would ever merge any of the entries in the payroll system or that any of these entries were ever labeled as "fatal pending". [Administrative Assistants Betty Jones and Linda Steimle; Interview with Department of Candidate and Voter Services Manager Mike DeFranco 6/20/2006; Interview with IT/GIS specialist Matt Jaffe 6/21/2006; Dr. Norman Robbins' report on missing registrations]

2.2 Finding: Verifications of unexplained missing records also exist in document 3.28-3 in a 12/16/2005 report from Executive Administrator Maiden to Assistant Manager Lawler; and in an 10/21/2005 report. Notably, a DESI publication states:

Now in beta testing. We will enhance the system so that a MERGED voter record can be unmerged by the user when he/she believes the record was merged in error. The user will look up a voter record to determine if said record was merged with another voter record. Then if the user determines the merge was performed in error, the user can select the merge and reverse it by clicking the UNDO button. [DESI March 2006 Volume 1, Issue 8 VR NewsVue, new DIMS-net feature 29]

2.3 Recommendation: DIMSnet must be equipped with a more robust method for entering, tracking, and maintaining records. The merge record feature should display a warning prompt before allowing DIMSnet operators to merge records. Additionally, there should be an archive of all merged records so that a CCBOE employee could go back through these records to try to identify where the problem occurred. Correcting the problem of “fatal pending” records requires DIMSnet to be updated with a function that will allow for more accurate entry of street addresses.

2.4 Finding: In DIMSnet, registration records in which street addresses or voter names are entered incorrectly are assigned “fatal pending” status (e.g. if a voter residing on “East 55th St.” is entered into the system with an address on “E 55 St.” the system will not complete the registration because it categorizes the voter as lacking a valid address). Entire street addresses must be typed into the system rather than selected from a drop-down menu of possible valid completions as the address is entered. VEMACS allowed street addresses to be selected from a drop-down menu, greatly reducing the probability of an operator entering an address that the system does not recognize. [Demonstrated in an interview on 6/20/2006 with the Manager of Candidate Voter Services; also confirmed in Dr. Victoria Lovegren’s 3/20/2005 report]

2.5 Finding: DIMSnet does not limit the name entry to alphabetical characters only. A DIMSnet operator could also enter numbers and symbols while inputting voter names. This also increases the probability of operator error. [Demonstrated in an interview on 6/20/2006 with the Manager of Candidate Voter Services; also confirmed in Dr. Victoria Lovegren’s 3/20/2005 report]

2.6 Recommendation: Street name entry should be limited to the selection of the street name from a drop down menu within DIMSnet. This restriction would greatly reduce the chance of an operator error by limiting the number of possible entries within the system. This design feature facilitated greater productivity and accuracy in the VEMACS system used before DIMSnet was acquired. Veteran CCBOE Registration employees stress this as a major setback of the DIMSnet system. Entry of names should be limited to alphabetical characters only. DESI staff informed the CCBOE Ballot Department Manager that this limitation was not possible because of an individual residing in California with the last name “#2”.

2.7 Recommendation: Voter registration cards should have an optional field for phone numbers so that a voter can be reached if address information on his or her registration card is found to be incorrect, CCBOE staff should attempt to contact every such voter. The need for this field should be thoroughly explained so that voters will understand why they are being asked for their phone numbers.

2.8 Finding: DIMSnet does not adequately permit searches for voters by name. At times, a DIMSnet operator will search for a person by name, but the search will return no results, so the staffer then has to search for the voter by address. CVS Manager DeFranco stated that he has seen these problems occur, but that they are impossible to document completely because these errors do not occur consistently; a name search might bring up nothing in one instance but will accurately locate the voter in another. [Interview with Manager of Candidate Voter Services; Dr. Victoria Lovegren's 3/20/2005 report]

2.9 Recommendation: The software problems causing this intermittent failure to search database records properly must be located and isolated through thorough system testing and analysis. The best possible solution would allow a DIMSnet operator to enter a person's name or street address with either search approach returning accurate results quickly and consistently.

DIMSnet software freezes when calling up archived registration cards

2.10 Finding: Once batches of voter registration cards have been scanned and entered into DIMSnet, the original ballot images are archived for storage. The "Restore Batches" function in DIMSnet is supposed to retrieve archived registration card images, but invocation of this function causes the system to freeze and become unusable. The system operator must then force-quit the program and restart DIMSnet. [Demonstrated on 6/20/2006 by the Manager of Candidate Voter Services, and mentioned in a CCBOE document (undated) from IS Administrator Lou Irizarry]

2.11 Recommendation: DESI must remedy the shortcomings of its DIMSnet system. This problem must be reported and accurately tracked through the DESI customer support system until the issue has been resolved.

Additional CCBOE trained staff needed to create DIMSnet reports

2.12 Finding: The Crystal Reports reporting software embedded in DIMSnet allows operators to generate pre-defined reports of the data in the DIMSnet database. An operator with knowledge of Crystal Reports can create report templates to meet CCBOE's needs. Presently, CCBOE is only able to make limited use of this feature because it lacks sufficient staff who know how to create the reporting templates. Those personnel who do know how to create the report templates have other responsibilities and lack the time to dedicate to report creation. CCBOE uses another version of Crystal Reports for other purposes, but the templates created for that version are not compatible with the version of Crystal Reports embedded in DIMSnet. This incompatibility creates

problems in extracting information from DIMSnet. [Interview with Candidate Voter Services Manager on 6/20/2006; Confirmed by GIS Technician Jaffe 6/21/2006]

2.13 Recommendation: The Crystal Reports feature integrated into DIMSnet must be made more usable and must be customized to the needs of Cuyahoga County. The next version of DIMSnet must be upgraded with the newest version of Crystal Reports to avoid further compatibility problems. Furthermore, an employee at the CCBOE should be responsible for troubleshooting and creating these reports.

System “upgrades” issued for DIMSnet often introduce new flaws

2.14 Finding: DIMSnet upgrades are problematic. Upgrades have often caused DIMSnet features to stop working. DESI testing and version management of DIMSnet is very poor. At the time DESI releases an upgrade, DESI provides little information on the problems the upgrade is designed to fix or what other changes the upgrade will make to the system. These deficiencies are compounded by the fact that DESI customer support procedures require customers to adopt all upgrades.

Certain problems caused by DIMSnet upgrades can remain unnoticed for long periods, depending on the point in the election calendar when the upgrade is installed. Some features are only used in the time directly before or immediately after an election. Such examples include the absentee ballot and signature verification functions of DIMSnet.

According to CVS Manager DeFranco, the process of verifying that features worked correctly in DIMSnet after an upgrade became too burdensome for the Information Systems Department at the CCBOE. The task then devolved upon individual CCBOE department managers. DESI staff stated that each major version of DIMSnet is released with a printed list of features, for example, the listing of “New Dims-net features” in the March 2006 Volume 1, Issue 8 VR News Vue. However, when minor changes are made for a specific customer, they are merged into the next nationwide DIMSnet release without accompanying documentation. [Interviews with Candidate and Voter Services Assistant Manager Lawler, GIS Technician Jaffe, and Manager DeFranco. A specific instance of this problem is recorded in an October 7th report from Executive Assistant Lally to Executive Administrator Maiden in document 3.28-3; Interviews with Ross Underwood, Mike Lindross, Tim Murowski and counsel, 7/7/2006]

2.15 Recommendation: DESI must document in a user-friendly manner all DIMSnet upgrades. Each upgrade should contain as a bare minimum: any changes made to DIMSnet; all the functions of DIMSnet that these changes might affect; any testing done by DESI staff to verify the integrity of DIMSnet after the upgrade; a list of any known problems at the time of release; contact information for reporting any problems with the upgrade; and a list of features being considered for the next upgrade.

2.16 Recommendation: The CCBOE should create a streamlined process for testing new versions of DIMSnet before installing. This should be done by creating a test

environment for the upgraded system while leaving the previous release of DIMSnet operational. Information Systems staff should undertake the DIMSnet verification process because that staff is best-suited to identify and correctly characterize problems. This process should not be completed by department managers because it is not their area of expertise and it creates the potential for redundancy because several departments use the same DIMSnet features. If each IT staffer were assigned a particular list of DIMSnet functions to track and test for each upgrade expertise and efficiency could be developed internally. Department managers should convey their system needs to Information Systems staff. Information systems should do all testing of the system in the interest of time, efficiency, and accuracy. If provided with thorough DIMSnet documentation for an upgrade, CCBOE IS staff should reevaluate any workarounds then in place to determine whether any of the DIMSnet software improvements contained in the upgrade address the defect that originally necessitated the workaround.

The DIMSnet registration system needs to be customized for Cuyahoga County

2.17 Finding: DIMSnet is not customized to the needs of Cuyahoga County. DIMSnet is released and upgraded with a wide menu of features that, depending on the State and County, may be useful. Approximately fifty-five counties in five States use DIMSnet. This means that a large number of the features in DIMSnet designed for use elsewhere are not used by Cuyahoga County. Further, some features that would be useful for Cuyahoga County will not be created because they would not be useful for other DIMSnet customers. Essentially, the DIMSnet system design and support apparatus bars customization of DIMSnet. DESI states in its Election Systems Proposal for a Voter Registration System and Related Services for Cuyahoga County, November 7th, 2003 that “the county will benefit from many technology and application advances being designed and implemented for other DIMS counties in the US.” This promise of “benefit” to Cuyahoga has been unfulfilled; with DIMSnet designed so that it is a universal rather than a customized system. The system omits features Cuyahoga needs and includes others that are dysfunctional.

2.18 Recommendation: Smaller counties are able to modify their own procedures or create workarounds in order to use DIMSnet for their elections. Because of Cuyahoga County’s size and complexity, however, system customization is needed. Small changes such as creating customized data entry forms for voter registration cards would greatly reduce the risk of operator error and would increase efficiency by eliminating the amount of time spent determining which fields are relevant under our State law and which are not. While some of these changes seem trivial they could potentially save a great deal of time and money when taking into account the relative experience levels of CCBOE employees as well as the sheer volume of transactions that take place on DIMSnet in Cuyahoga County. The current DIMSnet system as implemented at the CCBOE is unworkable and according to GIS Specialist Jaffe, “essentially everything we do in DIMS is a workaround.”

Some important areas of DIMSnet where customization should be considered:

- Easier methods for printing duplicate labels for absentee voters
- Customized archiving features which would allow for easy management and referencing of previous elections; specifically previous petitions need to be archived.
- Signature verification features including the creation of signature sufficiently image button to verify that the registration signature sufficiently matches the petition signature
- A new field to designate a petition as a pre-check or as a filing
- Customized data entry tables for the voter registration department
- Auto type features to facilitate the data input process
- Automatic challenge code of “not registered” for non registered voters
- Custom sized data tables
- Features to help with the archiving of voters whose name changed
- Custom search features (specifically a search for voter that allows the operator to search by entering partial name and address)
- Customized crystal reports
- The process for scanning of returned ballots should be customized so that it can be completed in one step
- Customizations relating to interaction between DIMS/GEMS
- The batching system must be customized in order to prevent potential operator errors
- On a petition, when a duplicate signature occurs, the automatically generated report needs to include which part of the petition has a duplicated signature as well as what candidate the duplicate signature corresponds to owing Ohio law that requires not counting signatures as valid in certain circumstances.
- For petitions automatic page numbering for signer checking pages (manual input of page numbers creates the possibility that the wrong page number can be entered)
- Incorrect signature dates need to invalidate the signature only, not the whole part petition.
- A mechanism is needed to confirm that the person circulating a petition is a registered voter. In some cases a mechanism is needed to determine if the petition circulator is from the same city or ward — this depends on requirements established by city charter.
- As Ohio election law changes, new requirements such as for petition circulators pursuant to H.B. 3, Ohio’s DIMSnet must permit incorporation as DIMS features, in other words, DESI should create a separate state DIMSnet version for each State where it is deployed and allow for updating as state law requires.

DIMSnet software problems not tracked or effectively addressed

2.19 Finding: Currently CCBOE lacks a formal process for identifying, tracking, and resolving DIMSnet problems. Originally, agency staff used a form reporting DIMSnet errors, but after the November 2004 election this form was no longer used. Now

managers must try to resolve errors by contacting DESI directly or by approaching Information Systems staff in order to create workarounds. Although the Information Systems staff is currently understaffed for managing this process on their own, as of 7/5/2005.

Information Systems Administrator Lou Irizarry has started a DIMSnet problem management process.

When DESI was consulted concerning problems with Cuyahoga County's system, CCBOE staff were told that fixing the specific concerns or defects required "enhancements" which would demand additional compensation. After requests for alterations to DIMSnet that would permit DIMSnet to function adequately were made by former CCBOE head of Information Systems, Michael Coletta, DESI quoted a price of \$11,200. [DESI Proposal for a Voter Registration System and Related Services for Cuyahoga County, November 7th, 2003; interviews with IT/GIS Specialist Jaffe, Candidate Voter Services Manager DeFranco, Executive Assistant Lally, and Candidate and Voter Services Assistant Manager Lawler; Systems shortcomings are identified in a "DIMS questions" document provided by Information Systems Administrator Irizarry; Lawler's specific DIMSnet problems are identified in document 5.59 from 6/28/2006. Page 14 of the DESI proposal for A Voter Registration System states that, "DIMS assures that our software will be free from defect." DIMS Voter Registration Agreement, Schedule 1 to Exhibit C, Error Resolution Standards — Provides documentation as to what an error is and what remedies exist, documented in a 9/9/2005 email from Ross Underwood of DESI to Michael Coletta; interview with DESI staff Ross Underwood, Mike Lindross, Tim Murowski and counsel on 7/7/2006]

2.20 Recommendation: Executive management at the CCBOE must do a better job of encouraging employees to come forward with system problems and shortcomings and a better job of seeking and obtaining swift resolution. Director Vu informed us that he has told his staff to take all DIMSnet issues to Lou Irizarry, the head of IS, as of 7/5/2006.

2.21 Finding: From Fall 2004 through June 2006, the CCBOE managerial staff had decided it was a waste of time to report DIMSnet problems or any proposed customization because executive management would not take any action. Though they tried to flag DIMSnet issues, middle management had been frustrated in obtaining top managerial action.

2.22 Recommendation: The Board of Elections should begin to use a defect tracking system or bug tracking system in order to better manage all of the problems with DIMSnet. Currently there are several different CCBOE documents that describe various DIMSnet problems. This information should be kept in a centralized fashion in order to track how each issue is being resolved, who spotted the issue, who is going to be responsible for handling the issue, the general time frame for resolution, what departments this issue might affect, what functions it might affect and other related information. Mozilla's Bugzilla software is well suited as a system to track DIMSnet problems. Bugzilla would allow employees at the Board of Elections to track all

problems and changes to the DIMSnet software and would also allow CCBOE employees to communicate about these trouble areas. Bugzilla is used for a variety of purposes by large organizations such as AT&T, Advanced Micro Devices, and the University of Minnesota. (On 7/6/07 we were informed by Information Systems Administrator Irizarry that he was beginning the process of starting an error tracking system.)

2.23 Recommendation: Before the CCBOE decided to spend monies on DIMSnet enhancements, it needs a professional assessment of DIMSnet success in other complex jurisdictions. If it decides to move forward with desired changes that are mutually classified as “enhancements” made to DIMSnet, but finds DESI pricing unreasonable or unwilling to undertake the complete customization needed. CCBOE should consider purchasing a better, more reliable voter registration system. DESI DIMSnet staff will most likely be more receptive to any changes Cuyahoga County wishes to have made if the Board of Elections obtains the standard license for DIMSnet and begins paying the standard maintenance fee of \$50,000. Any replacement system should be thoroughly researched and tested before implementation and any new contract should explicitly state terms for system performance plus warranties and remedies that protect the county’s investment.

Other voter registration systems that should be considered include: ES&S Megaprofile (used by Hamilton County), and Sequoia’s Voter Registration System (Franklin County). Hamilton County BOE suggested that the ES&S system had problems interfacing with the Secretary of State’s DXI system and that the system was poorly supported. Franklin County expressed satisfaction with the Sequoia system describing it as being robust and having versatile report design and data output. [“Best practice” interviews with County Election Directors]

Inadequate research done prior to choosing DIMSnet as voter registration solution

2.24 Finding: DIMS represented that DIMSnet would work well in Cuyahoga County because it had been implemented in the County of Los Angeles (another large county) using a similar architecture. DIMS’ *Proposal for Voter Registration System* states, “DIMS’ track record of success includes large-scale voter registration systems, such as the County of Los Angeles, using a very similar architecture to that recommended for Cuyahoga County.” (At p.4) Two pages later , the proposal states:

Large Scale Implementations: Los Angeles County, with over six million registered voters, is one example of our experience and success with large-scale voter registration implementations. With 88 cities and municipalities within its boundaries, this system serves LA cities in much the same way Cuyahoga County serves the City of Cleveland and other municipalities and jurisdictions.

DIMS’ representations about DIMSnet were often misleading and incorrect. Another example of a misleading representation was that DIMSnet and GEMS were “seamlessly integrated.” [DIMS’ refusal to provide test version conveyed by anonymous staff

interview, verified by Director Vu; DESI's Cuyahoga County Proposal for Voting Equipment, pg 67; The lack of "Seamless Integration" between DIMSnet and GEMS verified by interviews with Ballot Department Manager Baker, IT/GIS Specialist Jaffe, and Executive Assistant Lally; DIMS' Proposal for A Voter Registration System, pg. 4; other DIMSnet problems outlined in Information Systems Administrator Irizarry's CCBOE document labeled "DIMS Questions"]

2.25 Recommendation: Given the sacred trust at stake the CCBOE should not have accepted DIMS' representations about DIMSnet without significant research and a test version. Where so much was at stake an independent consultant's review might have saved the CCBOE numerous aggravations as well as improved efficiency and staff morale. There was no rational basis for moving forward with DIMSnet when crucial questions persisted. The fact that the Secretary of State certified DESI as an e-voting machines vendor is no indication that the DIMS voter registration system was also recommended. Further, the fact that DIMSnet was being used by other large counties, such as Los Angeles County, is no indication that the system would work in Cuyahoga County, which has a completely different set of election guidelines and procedures.

2.26 Recommendation: The CCBOE should not have implemented DIMSnet without first verifying that it would:

- Meet their organizational needs
- Perform as promised and support an accurate, efficient, and cost effective election solution in Cuyahoga County.

2.27 Recommendation: The CCBOE should not have implemented DIMSnet without obtaining a test copy, receiving relevant feedback from other counties using DIMSnet, and identifying how the needs of Cuyahoga County differ from other counties already using the system.

2.28 Recommendation: If it is determined that DIMSnet must be replaced with a new voter registration and election management system, thorough testing must occur by each department at the CCBOE and all representations made by the system vendor must be verified before purchase and agency wide final installation.

The DIMSnet voter registration system is not certified

2.29 Finding: The DIMSnet voter registration system was never certified by the Secretary of State or the Federal Government, because neither Sovereign currently requires certification of voter registration systems. Perhaps the justification for a lack of certification standards for voter registration database system is because they are not used to record or tabulate votes. In a document from DESI answering CERP's 6/29/2006 questions, DESI stated, "DIMS-NeT does not have to be certified at this time. However, the DIMS-Net eXternal Interface (DXI), a related program specifically modified for Ohio to act as a "bridge" between DIMS-NeT and the Secretary of State's Office, was certified by the State to work with the State's software to upload information to and from DIMS-

NeT.” [Conveyed in anonymous staff interview; Confirmed in interviews with DESI Director of Research and Development Pat Greene and DESI’s Ohio Project Manager Jessica Hiner on 6/29/2006]

2.30 Recommendation: Although a voter registration system does not directly influence the recording and tabulation of votes, it indirectly influences the final outcome of the voting process because the system determines who is eligible to vote. The functions of voter registration systems are significant enough that they should be thoroughly analyzed before implementation. It is essential that all technologies that are used in the election process undergo rigorous certification assessments. CCBOE joined by the Cuyahoga County Commissioners and public interest groups should file a petition with the U.S. Election Assistance Commission the Ohio General Assembly and the Ohio Secretary of State requesting their creation of certification standards.

A large amount of voter registration data in the DIMSnet system is incorrect

2.31 Finding: A large amount of the voter registration data within DIMSnet is incorrect, duplicated, or incomplete. Numerous records have bad dates such as 01/01/1901 and other records are missing information. The SOS DXI system lists Cuyahoga County as having approximately 86,000 records that are duplicated in other counties within Ohio. This system links all voter registration systems throughout the state and searches for duplicate records. The DXI interface was not operable until immediately before the May 2nd election because it was not able to handle the number of duplicate records that exist in Cuyahoga County. The Secretary of State’s DXI User’s Guide itself states that, “While this system means more work for both the counties and the state, a lot of effort has been invested into its development...”

The CVS Department was unable to resolve these “dupe” issues due to understaffing and various problems with the Secretary of State’s DXI interface. [Interview with Candidate and Voter Services Manager DeFranco 6/20/2006; DXI system’s unavailability verified by a 2/7/2006 email from Candidate and Voter Services Assistant Manager Edwards to DeFranco, stating that Nick (last name unverified) at DESI’s election center in California said “The (DXI) system was never intended to store in excess of 80,000 records.”; The Secretary of State’s DXI User’s Guide V 1.8 2-18 pg. 4]

2.32 Recommendation: With its current low staffing it would be unreasonable if not impossible to ask the CVS Department to correct all of these data anomalies. A temporary, high quality team should be formed and trained by the CVS Department to undertake the process of cleaning up the incomplete, duplicate, and incorrect data entries within DIMSnet. Furthermore, procedures must be developed to reduce the amount of incorrect information entering DIMSnet in the future.

An unknown number of voter notification mailings are incorrect

2.33 Finding: DIMSnet is creating voter notification mailings with incorrect information. Mr. Ron Olson received a letter from the CCBOE postmarked 6/22/2006

that contained a large amount of incorrect information. This letter informed him that an election would be held in his precinct of North Olmsted on August 8th. Mr. Olson, however, lives in Shaker Heights. After calling the Board of Elections, Olson determined that his precinct was not involved in any August 8th election. Additionally, the mailing contained an incorrect phone number to reach the CCBOE. The phone number listed was 216-443-2398 and the correct number was 216-443-3298.

2.34 Recommendation: The CCBOE must determine how many incorrect mailings were sent on and around the time of 6/22/2006. Immediate action must be taken to identify and repair the error that is causing these incorrect mailings. Additionally, notices giving correct information to those who have received incorrect mailings should be sent as soon as possible.

2.35 Finding: In promotional materials used to sell DESI products to the CCBOE, Diebold implies that 14,000 workers worldwide are behind these efforts. In fact, only 166 of these 14,000 employees are employed specifically by the DESI division. Diebold also implies that its 150 years of experience are brought to bear with regard to election operations. In actual fact, Diebold's 2002 acquisition of Global Election Systems and subsequent acquisition of DIMS were Diebold's first exposure and undertaking of election work. Pat Green, DESI Director of Research and Development, knew very little about DIMSnet and referred all DIMSnet-related questions to actual staff of the recently purchased unit. [7/1/2005 promotional packet, Public Hearing 6/29/2006, DESI official responses to 6/29/2006 hearing follow-up questions 7/6/2006]

2.36 Recommendation: Marketing "puffery" can blur into deceptive business practices. Diebold/DESI must strive to make more accurate representations about the actual number of staff members they have engaged in election support activities. DESI should also accurately portray the duration of their experience in dealing with elections and election support materials, separating true employees from contracted temporary staff. Finally, DESI should be more candid about the actual level of integration between its DIMS voter registration team and its DESI general election support team.

The Payroll module in DIMSnet does not work correctly

2.38 Finding: The Election Day Technician/Booth Official payroll function of DIMSnet does not keep accurate records. A CCBOE document entitled "DIMS Questions" from Lou Irizarry, the Information Systems Administrator, lists several payroll problems including:

- Some "Notice to Serve" cards did not print.
- Poll worker assignments to polling locations were not saved. When referenced, some poll workers were not in the system and had to be re-entered.
- When the CCBOE sought to send checks out, some workers were not listed in the system at all.

- DIMSnet printed checks and envelopes with incorrect information. Some checks had incorrect zip codes, missing apartment numbers, incorrect names, and incorrect payment totals.

2.39 Recommendation: The CCBOE must isolate and identify all problems with the payroll system. The CCBOE or DESI should conduct an analysis to determine whether any of the problems present in the payroll system might also be present in other areas of DIMSnet. DESI should fix the payroll system free of charge, as it is clearly defective. If DESI will not do so the CCBOE should try to hold DESI liable for breach of contract under the clause stating that the system is “free of defects.”

Additionally, if DESI will not fix the payroll system embedded in DIMSnet it should no longer be used. Having a separate payroll system may be a better way of keeping accurate and complete records.

The DIMSnet registration system was not fully implemented in Cuyahoga County

2.40 Finding: The CCBOE does not utilize the Candidates module or the Election module of DIMSnet. Essentially, DIMSnet was never fully implemented in Cuyahoga County. This makes the process of exporting information from DIMSnet to GEMS significantly more complicated. DESI staff conveyed that using these Modules would make the entire voting process much easier and that full implementation of these modules would be relatively easy. According to DESI’s Tim Murowski the Candidates module could be implemented with few or no changes and training would take about two days. Murowski also stated that the Election module would require few or no changes and would take about a half day of training. [Interview of IS administration Lou Irizarry, Interview with DESI staff Ross Underwood, Mike Lindross, Tim Murowski and counsel on 7/7/2006]

Lou Irizarry was the first person to tell us that these modules were not used and that he believed using them would ease the DIMS/GEMS information migration process.

2.41 Recommendation: A full investigation should be launched to determine why DIMSnet was never fully implemented. The failure to fully implement DIMSnet is closely tied to several of the problems that led up to the May 2nd election.

DIMSnet must be fully implemented. The candidate’s module and election module must be activated so that the data transfer from DIMSnet to GEMS will not be as difficult for the next election.

DIMSnet and GEMS do not function well together

2.42 Finding: DIMSnet and the GEMS system were not “seamlessly integrated” as suggested by DESI. DIMSnet exports candidate and precinct information that is used for ballot creation in the GEMS system. This information could not be directly imported into

GEMS. When this DIMSnet data was exported precincts became disordered, candidate names were incorrect or truncated, and information was not in the correct format to be imported to GEMS. This caused the need for tedious hours of manual data entry to the GEMS server, which only permitted one keyboard user.

2.43 Finding: The CCBOE expected that this data migration process would be relatively easy; instead it cost staff weeks of extra work which severely impacted the work schedule for the May 2nd election. While the planned completion date for transfer of information from DIMSnet to GEMS was 1/10/2006, this process was actually not completed until 2/13/2006 according to status reports. This 2/13/2006 completion date may even be incorrect; according to a 3/2/2006 email from DESI's Tyrone Howard, the process might still have been incomplete as late as March 2nd, which was two months late. Additionally, validating the information imported from DIMSnet to GEMS took a month longer than expected; its planned date of completion was 2/24/2006 and the process was actually completed on 3/23/2006.

According to several of DESI's DIMS personnel this process was so difficult because Cuyahoga County did not use the election or candidate's module and because Cuyahoga County declined a DIMS/GEMS data transfer training session led by DESI's Tim Murowski. [Page 67 of DESI's Cuyahoga County Proposal for Voting Equipment states "DIMS-NeT and GEMS Election Management System: A Seamless Integration"; DESI's Cuyahoga County Project Manager Joe Nista's weekly status report 2/17/2006 and 3/24/2006; Interview with DESI DIMS staff Ross Underwood, Mike Lindross, Tim Murowski and counsel 7/7/2006]

2.44 Recommendation: As of this Report's date, the CCBOE Director and the IS Administrator take opposing views on whether the DIMS-GEMS interface problems have been solved. Director Vu asserts that exporting from DIMSnet to GEMS will be much easier the second time around. Information Services Administrator Irizarry believes that exporting from DIMSnet to GEMS will be just as difficult as it was in preparing for the May election. The appropriate CCBOE staff needs to undergo the DIMS/GEMS data transfer training session. They also must do a test import into GEMS very soon to determine how accurately, efficiently, and quickly they can undergo this process. In order to establish and meet an election preparation calendar, the staff must be able to estimate accurately how many staff hours the import/correction process will consume. The CCBOE must not assume this process will be easy and that its kinks have been resolved.

The CCBOE should contact DESI as soon as possible about activating the Elections and Candidates modules. The CCBOE should assess which Information System and Ballot Creation/tabulation staff need to attend DESI's training sessions and which classes are best suited for their needs. They should also consider bringing Chris Bellis to the CCBOE for an on site training session, over at least a three day period, with questions and processes prepared by the CCBOE in advance.

If DIMSnet is not replaced, it must be fully implemented. The Candidates module and Elections module must be activated so that the data transfer from DIMSnet to GEMS will not be as difficult for the next election.

DRE Units and Components

Keys to open secure compartments of DREs are not unique

2.45 Finding: The same barrel key opens all the DRE voting devices in Cuyahoga County. This key provides immediate access to the memory card behind one door on the back of the machine, to a second door that conceals a modem and a port for a network interface card, and also opens the printer housing. While the keys themselves would be very difficult to copy because they do not use a standard size, a copy of this key is sent to every precinct as part of the supply kit. Additionally the keys assigned to each location are not individually numbered, nor is there any record of which key is assigned to each precinct. This creates a significant security problem for the CCBOE and the devices. [Site visit and inspection of DRE devices at the CCBOE warehouse facility on 6/1/2006; Locksmith inspection of key and duplicability assessment at Cleveland Key, 17th and St. Clair]

2.46 Recommendation: Immediately after the L&A test on each individual device the CCBOE should place a recorded numbered seal over the modem access door. This would require modifying existing Secretary of State directives. If the precinct technical staff find that the seal is broken or disturbed in any way, the device should not be used in the election and should be quarantined until a forensic examination can determine if the device has been compromised. The CCBOE warehouse staff should also record the numbered seal on every DRE modem access door to insure that it has not been tampered with between Election Day and the day it is returned to the warehouse.

2.47 Recommendation: The CCBOE should attach a numbered bar code seal to each key in order to record each time a key leaves or returns to the CCBOE. Affixing a seal would allow the CCBOE to track any lost/stolen key to its assigned precinct and Presiding Judge.

A number of DRE units malfunctioned on Election Day

2.48 Finding: A number of DRE units crashed, froze, or malfunctioned during boot-up or use on Election Day, an unknown number of which were returned to service without further investigation. [Poll worker interviews; Interview with Deputy Director Dillingham; Ron Olson's 5/30/2006 report]

2.49 Recommendation: Testing should be carried out to determine what the possible outcomes are when a DRE unit crashes, freezes, or otherwise fails on Election Day. Testing should focus on the preservation and integrity of voting data following a system failure.

Machines that crash during Election Day should not simply be rebooted and placed back in service. There should be a specific procedure for tagging these units as TSx units that have crashed. The machines should then be investigated and repaired if they are defective. The circumstances of each crash should be documented to identify scenarios that cause DRE units to crash. If there are any indicia of a security breach on the malfunctioning DRE, it should be sequestered to preserve any potential evidence of wrongdoing.

DREs provide little voter privacy

2.50 Finding: As arranged in some polling places on May 2nd, DRE units did not provide enough privacy to voters. [Voter exit poll questionnaires; Ron Olson's May 30th report; Item #8 of the CCBOE's 11/28/2005 report to DESI's Jessica Hiner; Incident Sheets; EDT logs]

2.51 Recommendation: Voter privacy is mandated by ORC §3506.19 and §3506.10 (N). The Board of Elections must enforce recommended DRE floor placements and other features that provide more privacy and ensures compliance with ORC §3506.19 and §3506.10 (N). Disabled voters must be ensured the same amount of privacy as other voters.

The CCBOE took inadequate measures to safeguard the chain of custody of electronic voting equipment

2.52 Finding: Procedures regulating control and chain of custody of Election Day equipment are poor and underdeveloped. Security of the entire system depends upon access to election supplies.

Tamper seals were not logged. Numerous memory cards disappeared altogether or were found weeks after the election. Some voters left polling locations with voter access cards. Not all items from the polling locations were returned in the black binders. CCBOE staff was directed to take DRE units home the weekend before the election in order to test the transmission process. [Interviews with Ballot Department Manager Bob Baker 6/10/2006 and Deputy Director Dillingham 6/9/2006]

A 3/2/2006 NASED memo detailing newly mandated electronic voting security measures states: "Every memory card requires at least the same level of protection as the ballot boxes and ballots used in the election...Throughout the life of the voting system, the election official shall maintain control of all memory cards and keep a perpetual chain of custody record for call of the memory cards used with the system. Use controlled serialized seals that are tamper resistant and resistant to inadvertent breakage along with verifiable seal logs. *Failure to comply with this addendum negates the voting systems status as a NASED-qualified voting system.*" [emphasis in original]

2.53 Recommendation: Monitoring the chain of custody of memory cards and DRE units is particularly important because they contain vital election information including

ballots. Additionally, DRE units have software that must not be tampered with to ensure election integrity. The CCBOE must develop more strict procedures for handling and accounting for all memory cards on election night. Poll workers must be instructed to treat memory cards with the same amount of care they would give to paper ballots under the previous election system. During the course of our investigation four memory cards were found in DRE units, several weeks after the May 2nd election. The CCBOE needs to keep a strict account of how many memory cards go out on Election Day and how many memory cards are returned on election night, with a procedure for immediately seeking the lost memory cards.

Keys to memory card doors must be kept under watch by poll workers. Limiting access to the PCMCIA slots and memory cards is a core part of Election Day security. Tamper tape seal numbers must be logged with accompanying procedures and poll worker training on how to deal with breached seals. Encoders and access cards must be accounted for at all times. If someone was able to get an encoder and an access card they could potentially vote multiple times.

Information on DRE memory cards can be automatically deleted

2.54 Finding: A study shows that voting systems may overwrite voting data when the memory card is full. [The GAO's 11/21/2005 report]

2.55 Recommendation: What happens to information on the memory card when it becomes full must be investigated. The GAO's report on this problem states that votes could be overwritten when the card reaches its capacity. It would be best if DESI could find a way to remedy this problem such as a notification on the DRE that the memory card was almost full. The SOS and the CCBOE should determine how many votes can be cast per memory card on an election to election basis as the amount of information stored in one ballot is subject to change for every election. A full SOS and Federal analysis should be done to determine what potential this has to disrupt elections and the CCBOE should undertake a preliminary analysis to help guide it in fashioning appropriate procedures.

The memory cards used for electronic voting in Cuyahoga County have a potential for tampering, excessive expense, and chain of custody concerns

2.56 Finding: Memory cards can be tampered with, are overpriced, and are not treated with the degree of care that is necessary to guard against potential election problems.

Because so much vital information is located on memory cards, they are a prime target for tampering. A malicious voter or poll worker who wished to sabotage an election could do so by tampering with a card, loading a pre-voted memory card into a DRE, or loading a card with software code that could potentially compromise the system. (To gain entry to the PCMCIA slot where the memory card goes you need a key.) Problem 1.26 of Section 8, Diebold Risk Mitigation Strategies document 1/09/2004 states that "there is a risk that an unauthorized person could decrypt the contents of the

removable PCMCIA card using the hard coded key.” [Memory card modification is an issue that was brought to the CCBOE’s attention in an 11/21/2005 report by the GAO which was forwarded to the CCBOE by Harriet Slive]

As documented elsewhere in this report, a number of memory cards missing from the May 2nd Primary Election have yet to be accounted for. Additionally, though other vendors offer a similar memory card for \$26, DESI documentation prices the cards at \$135.

2.57 Recommendation: Poll workers and the CCBOE must be educated on the importance of memory card handling procedures and how unauthorized access to the cards can disrupt the election process must be stressed. A thorough chain of custody procedure must be created and followed by anyone who will come into contact with the memory cards. Memory cards should be provided with protective cases or sleeves to prevent them from being damaged by static, moisture, or debris.

2.58 Recommendation: Memory cards from other vendors should be certified for use and procured at market value.

A number of memory cards were placed in the wrong voting machines

2.59 Finding: Poll workers would occasionally place a memory card intended for a specific DRE unit into another DRE unit. This occurred because some DRE units were not marked with a number that corresponded to the memory card. If a poll worker places a memory card in the wrong machine this can be a source of confusion. In particular if a memory card goes missing and the CCBOE needs to re-create the card by going to the corresponding machine, it will be far more difficult if cards were that card was originally inserted in the wrong machine because the label on the card will not accurately reflect the machine that the memory card was used in. [Interviews with Ballot Department Manager Baker, IT/ GIS Specialist Matt Jaffee, and Executive Assistant Francis Lally; Incident Reports]

2.60 Recommendation: Both DRE units and memory cards must be clearly marked so that correct cards can be inserted into the machines. Poll workers must be informed of the importance of placing memory cards in the correct machine, and which of the machine’s numbers are to be used. Overall, a better system should be created to ensure that the correct memory card is in the correct DRE.

Voter Access Cards have problems with chain of custody, have potential for counterfeiting, and create bottlenecks

2.61 Finding: Access cards create a potential bottleneck for poll workers because a card must be encoded for each voter. Security regarding the possession of access cards is relatively low and some cards did not work or would stop working in the midst of Election Day. Because access cards can stop working, go missing, and are in constant use

there is a risk of running short of access cards on Election Day, with a resultant possibility of delays at the polls and disenfranchising voters.

There is a risk that someone could counterfeit supervisor or voter access cards in order to access secure functions of the voting machine or cast extra ballots, because access cards used for voting are no different from those commonly used in mainstream commerce. [Poll worker interviews; Incident Reports; risk of counterfeiting access cards is identified in 2.01 of the section 8 Risk Mitigation strategies document from 1/09/2004; also discussed in email correspondence between Director Vu and Pat Green dated 3/21/2006]

2.62 Recommendation: All access cards must be accounted for, including cards that appear to be nonfunctional. Voters must be informed about the importance of returning cards after their use and poll workers must be trained in how to watch and reclaim these cards. Election Day materials should include several extra access cards as they are essential to the voting process. A full investigation should be conducted on the ease with which one could create an access card in order to disrupt or tamper with the election process.

Access cards are given a digital signature by the Secretary of State. The CCBOE needs to determine if the Secretary of State uses the same signature for the entire state or if it is on a county to county basis. In other words the CCBOE needs to find out if one access card would work anywhere in the state. This could be problematic if other counties do not have as stringent of procedures regarding access card management.

Voter Access Card encoders make it too easy to encode for the wrong ballot

2.63 Finding: During a demonstration of the Voter Access Card encoder, it was apparent that the encoder automatically defaulted to a Democratic ballot. The reason for this is because the options are placed in the encoder in alphabetical order. Therefore, if the poll worker does nothing the encoder will program the access card as a Democratic ballot. [Demonstration of device and interview with Deputy Director Dillingham 6/7/2006]

2.64 Recommendation: In order to remain non-partisan in the execution of the election, it is recommended that the default position on the encoder be changed to “issues only” for primary elections. This would require the poll worker to take an affirmative action to give a voter a Democratic or Republican ballot.

Split precincts experienced a number of encoder problems

2.65 Finding: In precincts that are split into two school districts, the CCBOE supplies separate sets of encoders to give voters the correct electronic ballot. The encoders were marked by stickers and caused confusion among poll workers. In some cases this caused poll workers to incorrectly encode voter access cards, which resulted in voters receiving incorrect ballots. When this occurred it prevented voters from being able to vote on their

school district issues and gave other voters the ability to vote on issues outside their precincts or school districts. This irregularity potentially violates §3506.10 (B) and §3506.10 (C). The same problem can arise when a voter is mistakenly given an access card that is encoded for the wrong precinct: certain races or issues specific to that precinct do not appear on the ballot.

No encoder was created and provided for precinct 4B in Highland Heights. As a result Donna Parina was unable to receive votes or vote for herself as a write-in for precinct committeeperson. The only encoder that the poll workers had was for precinct 4A. No votes were recorded for Donna Parina even though friends and family intended to vote for her. Other candidates also complained of their names not appearing on ballots. [Interviews with Information Systems Administrator Lou Irizarry 7/6/2006; confirmed as a potential problem by Ballot Department Manager Baker 6/20/2006]

2.66 Recommendation: Poll worker training must be improved and if possible a better system must be developed for handling split precincts. The SOS should consider this problem. The current system makes it possible that a voter could receive a ballot that does not contain issues it should or that contains issues that it should not. This is in direct violation of Ohio law. Additionally, precautions must be taken to ensure that enough encoders are provided for each precinct and that voters are given access cards that are encoded for the correct precinct. The option of using specially trained poll workers to handle all split ballot styles should be considered as an alternative to supplying separate encoders.

Encoders experience problems including difficulty of use, failures, provisional ballot problems, and battery life

2.67 Finding: Many poll workers found the encoders were not easy to use. The lanyards on the encoders were very short which made it hard for some poll workers to encode an access card while wearing the device around their neck. Encoders have very small buttons which are difficult for some poll workers to use.

The design of the encoder increased the chances that a poll worker would mistakenly encode an access card incorrectly. Also, because of the size and nature of the encoder's display, it is difficult for one poll worker to determine how the other poll worker is encoding an access card. This undermines the oversight intended by the partisan-balanced election one D, one R system employed in Ohio.

Booth officials could potentially create a provisional ballot for a legitimate "regular" voter which would cause the vote to be void because provisional ballots must be cast with requisite paperwork. Also, a provisional voter could have an access card encoded as though they were a normal voter which would cause their vote to be counted without verification of their eligibility to vote. This could happen accidentally or intentionally.

If an access card is left in an encoder the battery life will be depleted within several hours. There is no low battery notification and batteries are difficult to replace. One

individual stated that he was only to get four and a half hours of battery life after continued use and he did not receive a low battery message before the unit shut off. [Item #6 of the CCBOE's 11/28/2005 report to DESI's Jessica Hiner; email from Executive Assistant Gary Barna to CCBOE staff]

2.68 Recommendation: All provisional voting must be done using optical scan ballots to prevent these grave problems.

2.69 Recommendation: Encoders need to be made more usable for all poll workers. Precautions should be taken to ensure that there is minimal error in the encoding of access cards. Also, encoders should be designed in a fashion so that all poll workers and the voter can tell how the card has been encoded and if it has been encoded correctly.

Encoders need to have a low battery indicator and all precincts should be provided with extra encoders in case batteries fail on Election Day.

Extra encoders should be provided to each precinct to ensure that the voting process flows smoothly. The CCBOE should not allow the use of DREs as encoders as a contingency plan as it could cause longer wait times and voter dissatisfaction.

The Voter Verified Paper Trail (VVPAT) created confusion among voters

2.70 Finding: Many voters did not know that they could check the printer display for verification of their vote because the DRE printer's opaque cover had to be opened in order to see the VVPAT print of their votes. If voters are not well informed about the VVPAT they will not be able to use it to verify their vote. The VVPAT display was very difficult to read for some voters because of the font size/ type and the magnifying plastic cover. The CCBOE was aware that some voters might not check the VVPAT and states that "A voter is not going to know why it is even there unless they open it up. The cover should either be eliminated or in the open position all of the time." [Item #11 of the CCBOE's 11/28/2005 report to Jessica Hiner; Incident Reports]

2.71 Recommendation: Doors covering the VVPAT should be removed. A DESI representative claimed that VVPAT doors are installed as a way to ensure the privacy of blind voters. This was never explained in greater depth to us. If this is the case the doors should be removed from all DREs except the ones equipped with equipment for disabled voters. The font size on the VVPAT should be increased to accommodate older voters and voters with poor eyesight.

Malfunctioning VVPATS, trouble installing printers, questions regarding storage of VVPAT

2.72 Finding: Poll workers experienced significant difficulty installing the printers and loading the paper. It was easy to load the paper backwards which prevented recording of the paper trail. Further, reports from poll workers indicate that paper sometimes would unravel altogether and make the paper spool unusable. Or, the face plate was installed on

the wrong side, requiring poll workers to remove and reinstall it—and this also sometimes caused the spool to unravel. Moreover, there are questions as to the integrity of thermal printer paper as it may not be resistant to heat, and both printer paper and ink are subject to fading relatively quickly. This situation results in the VVPAT potentially becoming unreadable within the required retention time of 22 months, violating §3506.05 (H)(3)(a). [Item #7 of the CCBOE's 11/28/2005 report to Jessica Hiner; Poll worker interviews]

2.73 Recommendation: All precincts should be given several extra spools of paper to ensure that there is enough paper even if a few spools malfunction or are misused. Training must include techniques for how to handle the paper rolls and troubleshoot the printers.

2.74 Recommendation: The CCBOE should conduct automatic routine, random audits of VVPATS according to standards that are announced and vetted in a public process. Audits are recommended by the Brennan Center for Justice's 6/27/2006 report on voting machine security. Further, the Center includes specific guidelines for conducting a VVPAT audit in this report. Failure to conduct regular and meaningful audits of VVPATs increases the security risks greatly.

2.75 Recommendation: A complete analysis must be done to test the longevity of the printed paper. This includes determining the environmental factors, including temperature and humidity, necessary to insure the paper trail can be stored for the required amount of time. [The Brennan Center for Justice's 6/27/2006 report on voting machine security]

Parallel testing to ensure proper operation of voting machines

2.76 Finding: Ohio does not require parallel testing by law but this practice, if followed correctly, can help to ensure that voting machines are operating properly. Parallel testing refers to auditing a voting machine during the actual election and monitoring for software-based attacks. Parallel testing is an effective security measure because it can catch any glitches or attacks that occur on the DRE that might be time sensitive or only active during election time. [Brennan Center Report, Page 14]

2.77 Recommendation: Cuyahoga County should perform parallel testing on a few machines during each Election Day. Additionally, the selection process of machines for parallel testing or VVPAT auditing must be transparent and random to ensure effectiveness. [Brennan Center Report, Page 15]

Accumulation and transmission processes create unacceptable levels of security risk and are too error-prone

2.78 Finding: While the current transmission and accumulation practices were intended to allow for quicker tabulation of an unofficial count and allow for results to be posted at the polling place, the current practices of the CCBOE actually increase the chances for

error and fraud. Further, on May 2nd, the hope of quicker tabulation through the transmission and accumulation procedure ended up taking much longer than anticipated on election night for various reasons.

2.79 Recommendation: The CCBOE should take immediate steps to eliminate accumulation and transmission of election results, and all memory cards should be transported directly to the BOE for direct uploading. The CCBOE should purchase 48 DESI Election Media Processors (EMP), each of which may be used to feed up to six memory cards at once into the GEMS system. At peak load these devices, which are pending ITA certification by the Secretary of State for use by Boards of Election, will allow the CCBOE staff to read 288 memory cards simultaneously and will eliminate the need to accumulate memory cards at the polling location and upload the cards at the transfer stations.

Implement procedures for addressing fraud or error

2.80 Finding: Although security seals are used by the CCBOE they are not recorded or strictly monitored. The security seals are essentially useless unless the CCBOE adopts sound methods for training and issues specific directions for election workers on what steps to follow if security seals are voided, broken, etc.

2.81 Recommendation: Procedures must be put in place for the usage, recording, and tracking of security seals. Further, the CCBOE must issue clear, easy to follow procedures for dealing with machines and other equipment whose security seals have been voided or broken.

The CCBOE must conduct random and transparent audits of all election and election support systems. The Brennan Center Report sets excellent guidelines for conducting such audits.

GEMS Ballot Creation and Tabulation Software

Overview of the present system

Several factors impeded the successful adoption of GEMS prior to the May 2nd election. The County's current GEMS configuration, with its hastily implemented workarounds and onerous usage restrictions, compromises election accuracy, security, efficiency and audit-ability to a degree that threatens both reliable election execution and regulatory compliance.

Problems with the CCBOE's election management systems and procedures adopted in the run-up to the May 2nd election fall into three general categories:

1. Differing expectations between DESI and CCBOE as to the capabilities of DESI's software systems, the role DESI was to play in preparing CCBOE's systems for the May 2nd election, and the depth of DESI-system-specific expertise that would

- need to be developed within CCBOE to permit it to become self-sufficient in election preparation. [Interviews: Director Vu, Baker, Jaffee, DESI reps; emails between Director Vu and Hiner]
2. The failure of either CCBOE or DESI to design and implement a reliable and practical procedure for relevant, appropriately structured data to flow from DIMSnet to GEMS. Upon discovery of the incompatibility of the two software systems as originally configured, the CCBOE and DESI personnel focused on implementing ad hoc workarounds and performing manual entry of essential data rather than on reconfiguring the two systems to work together. Most of the considerable effort that was expended on working-around the system incompatibilities in preparations for the May 2nd election would have been better directed toward reconfiguring the systems to work well together in preparation for May 2nd, and on into the future. [CCBOE staff interviews, CCBOE email and DESI hearing]
 3. Usability, concurrency and security limitations in the architecture of the GEMS software and the consequent restrictive regulations in place to accommodate these limitations. [Interviews with CCBOE IS and Ballot Department staff; consultation with county elections officials in California and Washington; DESI hearing]

In preparing for the May 2nd election, CCBOE lacked sufficient knowledge of and experience with GEMS, particularly with the importation of data into GEMS and the generation of reports of election results. For the May 2nd election, the CCBOE Ballot Department fashioned its own time-consuming and error-prone workarounds and procedures. Even now, the Ballot Department is reliant on informal (and likely uncompensated) support from DESI technicians. [Interviews with CCBOE staff, including Baker and several IS staff; demonstration of processes by ballot department; DESI hearing; DESI representatives]

In preparation for May 2nd, CCBOE relied on some of DESI's misleading and unfounded representations

2.82 Finding: CCBOE and DESI had drastically different expectations as to the potential for interoperation of DIMSnet and GEMS, and for the nature and scope of the assistance DESI was to provide to the CCBOE in implementing an integrated, reliable and efficient electronic voting system for Cuyahoga County. DESI's representations to the CCBOE about the DESI election products and related services in contracts, proposals, marketing collateral, product documentation and informal communications are misleading or demonstrably false. In response to the CCBOE's RFP, DESI submitted a proposal which identified the advantages CCBOE could expect if it purchased DESI systems. One advantage cited was the "seamless integration" of DIMSnet and GEMS. [DESI proposal to CCBOE, DESI letter to Director Vu.; DESI hearings; Interviews with Ballot, IS and CVS staff, Director Vu]

DESI's DIMSnet registration system was offered at a discount to the CCBOE, possibly in order for DESI to get a foothold at the CCBOE in order to increase DESI's chances of getting Cuyahoga County to adopt DESI election management system and voting equipment when the County selected a vendor for its HAVA-funded election system purchases. [CCBOE contract for DIMSnet; CCBOE proposal for DIMSnet; Statements between Cuyahoga County lawyers and Director Vu regarding the negotiations for DIMSnet; Interview with Director Vu]

Director Vu anticipated, based in part by representations made by DESI, that substantial benefits would accrue to the CCBOE if it used two integrated systems from the same vendor. With DIMSnet already in use at the CCBOE, the suggestion was that they could expect the two programs to interoperate without the integration difficulties and processes that would be required if the County chose systems from different vendors. The Board's decision to select GEMS and its related e-voting systems was heavily influenced by the anticipated interoperability of DIMSnet and GEMS. [Interviews with Director Vu, DESI proposals]

CCBOE made personnel and other resource allocation decisions based on its expectations with respect to, *inter alia*, the amount of effort required to integrate DIMSnet with GEMS. This understaffing directly contributed to the problems leading up to the May 2nd election. [Interviews with Director Vu, Deputy Director Dillingham, Ballot Department and IS staff]

2.83 Recommendation: In future dealings with DESI, CCBOE should scrutinize and verify DESI representations before accepting as truthful and taking action in reliance on those representations. Wherever possible, the CCBOE should insist that DESI representations on which it plans to rely be made expressly in contracts, with contractual penalties (including perhaps liquidated damages) for any material misrepresentations.

DESI assistance, training and knowledge transfer

2.84 Finding: DESI sent no one who had substantial GEMS training as a part of the DESI Cuyahoga Project Team, thus not providing the same level of support to Cuyahoga as to, for instance, Lorain County. Lorain County had already run one DRE election, and despite Cuyahoga County being far more complex and populous, and having larger hurdles for launching the dual systems in the May 2nd primary, DESI chose not to place equally well trained and experienced DESI personnel here.

Technicians allocated to Cuyahoga County (Jeff and Tyrone) only received GEMS training just before assignment; had no depth training and experience, unlike Lorain County with Chris Bellis; Tyrone was at the same GEMS training session as the CCBOE staff and said this was his initial training on GEMS.

After CCBOE five-day GEMS training, CCBOE staff could not practice or use the GEMS system because it had yet to be installed at the CCBOE.

Joe Nista, an employee of a subcontracted firm (Sogeti USA), lacked the range of experience necessary for generating an appropriate Election Plan for launching the entire system in the complex May 2nd primary.

DESI refused to provide a training or demo copy of GEMS — not even for practice.

2.85 Finding: DESI personnel in Ohio characterize CCBOE as insistent on mastering the new electronic voting systems prior to the May 2nd election so as to be able to conduct future elections without depending on DESI's assistance. This is, in essence, the same way that individual personnel at CCBOE describe their approach to the adoption of electronic voting. DESI suggests that the problems incurred by CCBOE in attempting to integrate GEMS into their election preparation procedures were due to the fact that DESI's offers of assistance were rebuffed by CCBOE management, who insisted on becoming self-sufficient with respect to election preparation despite the limited amount of transitional time. CCBOE management insisted that agency self-sufficiency be attained by the May 2nd election. It did not conduct a detailed evaluation of whether that deadline and expectation was reasonable given the complexity of the new material CCBOE had to master to run electronic elections [DESI hearing; Interviews with Director Vu, Deputy Director Dillingham, Baker]

The CCBOE was unique among DESI's Ohio counties in its insistence on taking the lead in preparation for May 2. The CCBOE maintains that it wanted training and overall assistance from the DESI contractors assigned to help them, but did not want DESI to simply step in and do the work for them, leaving them dependent on DESI for technical services in future elections. [Interviews with CCBOE management, DESI hearing, emails between CCBOE management and Hiner]

2.86 Recommendation: The CCBOE should, to the extent possible, work on its conversion to electronic voting and attend appropriate training outside the context of hurried preparation for an impending, complex election such as that of 5/2/2006. DESI should make a clear commitment to aiding the CCBOE to become self-sufficient in its conduct of elections. A reasonable timeframe should be established for CCBOE's achievement of self-sufficiency.

2.87 Finding: DESI's DIMSnet software was already in place at CCBOE at the time that the County was selecting a vendor for its voting and election management systems. In the course of trying to make a deal with the County to become the County's election systems vendor, DESI DIMS and DESI GEMS personnel made representations about the interoperability of DIMSnet and GEMS, stating that DIMSnet and GEMS utilized a common data structure that would allow DIMSnet to generate a data file containing the candidate, race, precinct and polling place data for an election in a format GEMS could easily process to populate its own database. [DESI proposal to CCBOE, interview with Director Vu, email between Director Vu and CCBOE counsel]

The promised ease of data transfer from DIMSnet to GEMS has yet to be realized in Cuyahoga County, and no single factor, by itself, explains this failure.

2.88 Finding: Whatever its formal corporate structure, from the perspective of its customers, DESI is not a single provider of election solutions, but rather two, largely independent vendors under a common brand. The DIMS unit provides software to handle voter registration, among other things. The EMS/DRE unit is a vendor of: (1) software for electronic and paper ballot creation, vote tabulation and reporting of election results, and (2) voting machine hardware and software. No DESI representative has yet been able to identify any significant work DESI has done to integrate DIMSnet and GEMS software following its acquisition of Global and DIMS. Likewise, its engineering, training and support organizations lack the requisite integration to be of service to customers attempting to use DIMSnet and GEMS together effectively in a complex electoral jurisdiction such as Cuyahoga County. [DESI hearing, discussion with DESI's DIMSnet representatives, email between DESI and project manager contracted by DESI to oversee Cuyahoga County]

2.89 Recommendation: Proper integration of DIMSnet and GEMS is perhaps the most crucial technical challenge to be addressed before the upcoming November election. This project should be given the utmost priority and should be allocated whatever resources — including funding, personnel, consultants, training, software and hardware — are required to get the job done and done well.

2.90 Recommendation: If DESI has misrepresented its products in a manner that causes significant, unforeseen costs to be assumed by Cuyahoga County, legal recourse should be considered. Our quick review suggests the county does have standing and potential grounds, but this is a matter that should be referred to the Board's legal counsel.

Management and personnel issues

2.91 Finding: Director Vu and Deputy Director Dillingham effectively ordered workers to do the impossible, or nearly impossible, with inadequate resources (e.g. L&A and transmission testing schedules; GEMS ballot preparation without adequate time or training and using a single input terminal; generation of reports without adequate Crystal Reports training) forcing CCBOE personnel to: (1) cut corners, (2) work inhumane hours, often without recognition or compensation, or (3) fail to complete tasks on-time [Emails between CCBOE management and staff; emails between CC project manager for DESI, DESI technicians and Hiner; Interviews with CCBOE department managers, line staff and warehouse workers; interviews with Director Vu and Deputy Director Dillingham]

2.92 Finding: The Ballot Department has insufficient staff with the requisite experience and expertise to make effective use of the election management facilities GEMS provides.

In preparing for the May 2nd election, CCBOE lacked sufficient knowledge of and experience with GEMS, particularly with the importation of data into GEMS and the generation of reports of election results. For the May 2nd election, the Ballot Department fashioned its own time-consuming and error-prone workarounds and procedures. Even now, the Ballot Department is reliant on informal (and likely uncompensated) support

from DESI technicians. [Interviews with CCBOE staff, including Baker and several IS staff; demonstration of processes by ballot department; DESI hearing; DESI representatives]

Ballot Department Manager Robert Baker began working as the leader of the Ballot Department only 3 months prior to the 5/2/2006 election. Baker lacked relevant experience in a number of Ballot Department tasks. In interviews, Baker said he had not received GEMS training but the Director and Deputy Director stated that a prime reason he was hired lay in Baker's having prior GEMS training. CCBOE did send Baker to GEMS training several weeks *after* the May 2nd election. It is clear that at the time of the May 2nd election, Baker was not prepared for the responsibilities of his position. [Interviews with Baker, IS staff, emails between CCBOE staff and DESI personnel and contractors, interviews with the Director and Deputy Director]

The CCBOE may have chosen not to take advantage of all training and assistance offered to it for transitioning to an electronic voting system; conflicting information was presented. [DESI hearing; Secretary of State's master contract with DESI; discussion with DESI's DIMSnet representatives; email between Hiner and CC project team]

2.93 Finding: Director Vu, at times, frustrates DESI's attempts to support the County by rejecting DESI's recommendations with respect to equipment, training, and the timeframe and manner of achieving the CCBOE's goal of self-sufficiency. [Email between Director Vu and Hiner; email from CC project manager and Hiner; CCBOE contract with DESI; CCBOE staff emails]

2.94 Recommendation: While the CCBOE is justified in its criticism of DESI representations and support, the Director's and Deputy Director's unrealistic plans and expectations for achieving proficiency must be taken into account. DESI's guidance, informed by its experience and expertise with its own systems, led its Project Manager to urge the CCBOE not to try to assume so many tasks for its first e-voting election.

Data importation was a significant problem

2.95 Finding: Ballot creation system at the CCBOE, as presently configured, staffed and operated, requires an unmanageable amount of manual data entry. [Interviews and demonstrations by Ballot Department staff]

2.96 Finding: The importation of election data was perhaps the most significant problem encountered by the CCBOE in the use of GEMS in preparation for the May 2nd election. Not only did it consume the time and exhaust the energy of the staff and contractors, it also held up numerous critical activities that could not be performed until the GEMS data were entered, edited and proofed. Facing the sheer volume of work needed to get the necessary data into GEMS, the burdensome security mandates that constrained the use of GEMS, and fundamental technical limitations of the GEMS software itself, the CCBOE Ballot Department circumvented established procedures in a manner that compromised the efficiency, accuracy and security of the May 2nd election. [Interviews with Ballot

Department staff, CCBOE Director and Deputy Director, email between IS staff and DESI contractors]

2.97 Finding: DESI's DIMSnet software was already in place at CCBOE at the time that the County was selecting a vendor for its voting and election management systems. In the course of trying to make a deal with the County to become the County's election systems vendor, DESI personnel made representations about the interoperability of DIMSnet and GEMS, stating that DIMSnet and GEMS utilized a common data structure that would allow DIMSnet to generate a data file containing the candidate, race, precinct and polling place data for an election in a format GEMS could easily process to populate its own database.

2.98 Finding: The CCBOE does not have written procedures for electronic ballot preparation. [Interview with Ballot Department staff]

2.99 Finding: The mandate that a single, non-networked, computer be used to for all data entry, ballot creation and report generation, and a single authorized operator (Baker), created a backlog and occupied Baker's time when he should have been tending to other managerial duties. [Interview with Ballot Department and IS staff]

2.100 Recommendation: Proper integration of DIMSnet and GEMS is the most crucial technical challenge to be addressed before the upcoming November election. This project should be given the utmost priority and should be allocated the necessary resources — including money, personnel, consultants, training, software and hardware — as are required to get the job done and done well.

In addition to this troubling disregard of security protocols, this scenario suggests that policies limiting GEMS access to a single operator are unrealistic for a county the size and complexity of Cuyahoga. [Interview with IS and Ballot Department staff, DESI hearing]

In discussing Best Practices for populating the GEMS database, DESI representatives suggested manual data entry as an appropriate substitute for the problematic DIMSnet-to-GEMS export. A manual approach to GEMS data entry, given the complexity of Cuyahoga County's elections and the short window of time between finalization of candidates and the deadline for producing ballots, is unworkable. In failing to offer a realistic practice for the CCBOE's use of GEMS, representatives basically abandoned the County; in pursuing a workable implementation of GEMS in the complex county, CCBOE was on its own. [DESI hearing; emails between Hiner and project manager for Cuyahoga County]

2.101 Recommendation: The CCBOE's successful integration of DIMSnet and GEMS is essential. A practice of continuing to execute elections using workarounds is untenable.

As currently configured and used, GEMS reporting facilities do not meet CCBOE's needs

2.102 Finding: CCBOE relies on the tabulation server to generate various reports of election results. GEMS, as presently configured and staffed in Cuyahoga County, offers inadequate reporting facilities to meet the needs of the CCBOE. CCBOE requires a broad range of election results reports. In addition to basic vote totals, CCBOE needs breakdowns of data by polling place, precinct, district, absentee, provisional, and many others. CCBOE management was not satisfied with the reports generated by GEMS following the May 2nd election. [Examination of reports; interviews with Ballot Department staff, Director Vu]

2.103 Recommendation: The CCBOE should work with DESI to define the necessary reports and ensure that they are possible using GEMS. The CCBOE must also prepare to hire additional personnel with experience designing reporting templates should the CCBOE presently lack sufficient personnel with such expertise at present.

Security practices must be adopted and observed

2.104 Finding: In the period leading up to the May 2nd election, there were two operator accounts set up on the GEMS machine: *gemsuser* and *gemsadmin*. The former account is used for data entry and ballot configuration, the latter to configure the GEMS application itself. There was a single password for both the *gemsuser* and *gemsadmin* accounts. Considering that so many unauthorized persons were permitted to use the system and, therefore, likely to have known this password, all operators could change both the data in GEMS via the *gemsuser* account and reconfigure the system using the *gemsadmin* account. [See GAO Report#: GAO-05-956, p26] On top of this, the fact that all operators used the same, anonymous accounts (*gemsuser* and *gemsadmin*) prevents anyone examining transaction logs from determining which person made a particular modification to the system. Logs would only show that transactions were performed by either *gemsuser* or *gemsadmin*, rather than a specific individual. [Interview with Ballot Department staff; NIST SP 800-27, Rev. A: Engineering Principles for Information Technology Security (A Baseline for Achieving Security), June 2004]

2.105 Recommendation: Basic security practices must be adopted and enforced for the GEMS system. Important aspects include: limiting authorized operators, limiting operators to appropriate roles, and ensuring identification of specific operators for logging and auditing purposes. These practices must be viewed as absolutely essential for the basic integrity of Cuyahoga elections and election reporting. They should be designed by security experts, have penalties for employee noncompliance, and be a part of Ballot and IS Department training.

Some security mandates are of dubious benefit and restrict necessary usage

2.106 Finding: The Secretary of State mandates the installation of Digital Guardian (“DG”) software on the GEMS computer. This software, among other tasks, monitors and constrains data access and modification of a system’s configuration. While DG offers a security benefit as configured in the CCBOE GEMS system, it inhibits the use and maintenance of the GEMS machine while providing only limited security benefits. For example, some basic system maintenance is impeded and requires the cooperation of the Secretary of State’s office, and data are routinely moved between the GEMS machine and machines that do not have the software. [Secretary of State Guidelines, interviews: Ballot and IS department staff, Digital Guardian software vendor website <http://www.verdasys.com>]

2.107 Finding: Per Secretary of State Directive #2005-23, county election boards are prohibited from connecting GEMS to a local network, even if that network is completely isolated from other networks. It is not clear how using a single, isolated computer for all GEMS data entry is significantly more secure than a small network of dedicated computers completely isolated and not networked with other systems. This prohibition impairs the efficient use of the system. [Secretary of State directives, Interviews with Ballot and IS staff]

2.108 Finding: Core aspects of the GEMS architecture are not well suited to CCBOE’s present needs and, further, cast doubt upon its capacity to meet future needs. GEMS relies on a Microsoft Access database. MS Access is typically used for home and small-business database applications and as a tool for rapid prototyping. It is not marketed as a robust, scalable and secure enterprise database solution such as Microsoft’s SQL Server and numerous products from other vendors. The use of this more-limited underlying database system constrains GEMS’ capacity for intrinsic security and auditability, concurrent usage, and system performance. Without the security features of a more appropriate database, GEMS’ database security depends primarily on controlling access to the GEMS server. GEMS architecture does not permit practical concurrent usage. Anticipated increases in the complexity of Cuyahoga County’s election needs (with factors such as multiple ballot languages on the horizon), may further tax the GEMS design and its underlying Access database management system. [DESI hearing; Interviews with IS staff; Microsoft Whitepaper on Choosing the Right Database Management System, <http://www.microsoft.com>]

2.109 Finding: A usage restriction on GEMS recommended by DESI and promulgated by Secretary of State, permits the use of only one computer (the GEMS server itself) for GEMS data entry, tabulation and reporting. At all levels, this restriction is presented as a security measure, and it does undeniably reduce to some degree the potential for tampering with the insecure GEMS database. It is important to note, however, that the GEMS architecture would not efficiently support multiple clients performing concurrent resource-intensive operations *even if security was not an issue*. [GEMS procedure

manual, Secretary of State directive #2005-23, MS Access database specifications; DESI hearing; Interviews with Ballot and IS staff]

2.110 Recommendation: As part of any security evaluation, a survey of the extrinsic security measures mandated for use of GEMS should be undertaken to identify which measures properly augment security and which are required to remedy the lack of meaningful intrinsic security features in the GEMS software itself. Vendors should be required to address and remedy security holes in their software rather than over-rely on extrinsic security measures, particularly ones that burden system usability.

2.111 Finding: Such security measures as the CCBOE implemented (e.g. restricted access to GEMS, tamper tape and seals on DREs, etc.) were ignored or frustrated by ineffective implementation. [Interviews with Ballot and IS staff, demonstrations at CCBOE computer room, pink room and warehouse]

2.112 Recommendation: The CCBOE's mandated actions to be taken in response to security breaches should be established, published, and a matter of core training leaving CCBOE personnel no discretion as to what steps to take upon discovery of a breach. [NIST SP 800-34: Contingency Planning Guide for Information Technology Systems (June 2002); NIST SP 800-61: Computer Security Incident Handling Guide (January 2004)]

Election Systems Testing and Certification

Testing by Certification Authorities

2.113 Finding: The multi-tiered voting equipment certification process contains numerous gaps. These gaps are profound, affecting accuracy and reliability of electronic voting results. Voters and election advocacy groups legitimate question the adequacy of the certification systems. Voter confidence in election systems based solely on Independent Test Agency (ITA) certification, government approvals and public logic and accuracy (L&A) testing is unjustified. Election systems are currently tested primarily for compliance with specifications. CCBOE officials responsible for implementation of electronic voting in this County did not adequately evaluate the chosen election systems' capacity to meet the County's unique needs, including its complex organization of precincts, districts and polling places, the unfamiliarity of CCBOE staff, poll workers and voters with electronic voting, and the effort and costs that would be needed to adapt CCBOE's prior practices to support a new type of election. [Caltech/MIT Voting Technology Project, Immediate Steps to Avoid Lost Votes in the 2004 Presidential Election: Recommendations for the Election Assistance Commission (Pasadena, Calif., July 2004)]

2.114 Recommendation: While each step in the testing and certification process has its role justifying confidence in election systems, it is ultimately the responsibility of those entrusted with the execution of elections at a local to ensure the integrity of the systems they select. The prior testing by vendors, ITAs and state authorities should be treated by

the CCBOE as a prerequisite to consideration, not a guaranty of suitability. Governmental entities charged with machine certification should undertake their own rigorous testing. Testing by government entities or their designees should be aggressive and focused on discovering flaws rather than merely validating specifications.

2.115 Finding: ITAs do not test, or claim to test, all potential weaknesses or vulnerabilities. Vendors and public officials often tout ITA certification as proof of reliability and security. It is not. A statement that a system is 'ITA Certified' is not an adequate response to public concerns about the security and reliability of an electronic voting system. Conversely, some individuals and groups wary of electronic voting criticize ITAs for not conducting tests beyond of their mandate and impute improper motives to the ITAs. This criticism is misdirected; the mandate must be changed in order to change the activities of ITAs [GAO Report#: GAO-05-956, p34-35; Brian Phillips, Systest Labs, LLC, Center for Election Integrity Public Forum, 6/9/2006]

2.116 Recommendation: ITAs should be evaluated on the thoroughness of the tests they are hired to conduct rather than the omission of tests they did not contract to perform. ITAs should be required to deny certification to systems if they discover material defects even when those defects do not fall within the scope of their testing mandate. In all cases, local and state elections officials should not rely on the limited ITA testing to decide if an election system is well designed for a particular jurisdiction's needs. [National Task Force on Election Reform, Election 2004: Review and Recommendations by the Nation's Elections Administrators (Houston, TX: Election Center, May 2005)]

2.117 Finding: Whatever the shortcomings the ITA testing regime, Cuyahoga County's experience with DESI systems offers compelling, if anecdotal, evidence that ITA testing has a positive impact on election systems. The contrasting experiences that Cuyahoga County has had with DESI's two major election administration software products, DIMSnet and GEMS, illustrates a benefit of the ITA certification. DIMSnet, used to process voter registration, candidate, race and various other election data, does not fall into a category of systems that requires ITA certification. In Cuyahoga County's experience, it is buggy, unstable and exhibits symptoms of poor software engineering practices. It is a monolithic, one-size-fits-all approach to handling the unique requirements of diverse electoral jurisdictions. In CCBOE's experience, DIMSnet displays haphazard configuration management and inadequate regression testing. GEMS, used in the county for ballot creation and vote tabulation, requires certification. CCBOE has found it to be stable and well tested. It demonstrates an awareness on the part of the vendor of the crucial importance of strict configuration management. There are reasons to expect that the difference in the two systems is, in part, due to ITA testing of GEMS. The requirements of the testing, as well as the time and expense of recertification of modified systems, forces vendors to adopt sound approaches to testing and configuration management. [Discussions with DESI's DIMSnet representatives; interviews with CVS and IS staff; demonstrations of GEMS and DIMSnet at CCBOE; DESI hearing, consultations with DIMSnet operators and former elections officials in counties in California and Washington]

2.118 Recommendation: All critical election systems should require some form of certification in order to promote sound engineering practices by the vendors.

2.119 Finding: Procedures of ITA testing are often treated as trade secrets, and not made publicly available for review. [GAO Report#: GAO-05-956, p35]

2.120 Recommendation: Release of testing protocols should be a requirement for a testing organization to become, or remain, an approved election systems ITA.

2.121 Finding: The reliability of election systems depends both on the systems themselves and the manner in which they are used, as demonstrated by a recent NASED directive modifying its certification of DESI systems, making its certification contingent on promulgation of certain memory card handling regulations. [April 2006 NASED Memorandum on Memory Cards]

2.122 Recommendation: ITAs should document acceptable procedures for use and configuration of systems they approve, issuing their own express guidelines upon which their certification is contingent.

Testing by the CCBOE

2.123 Finding: As presently performed at CCBOE, Logic and Accuracy (L&A) testing, while useful for identifying clearly defective machines before and after an election, is more akin to a demonstration process than a testing effort. Given that there are thousands of ballots styles and rotations and over five-thousand DREs to test, CCBOE's testing prior to the May 2nd election was far from an exhaustive evaluation of each DRE's performance in all of the circumstances it was likely to confront on Election Day. [See findings of specific testing practices, herein; interviews with IS and warehouse staff; testing protocols; statements of testers; email between CCBOE management and staff and project manager for Cuyahoga County]

2.124 Recommendation: L&A testing procedures should be changed to provide a thorough pre-election test of all machines such as would be worthy of public confidence. An analysis of the problems encountered on Election Day and of all probable scenarios should be used to redesign L&A tests. CCBOE should consider contracting an outside organization to design and perform the testing — an organization that does not have a strong interest in results of the testing as the CCBOE does.

2.125 Finding: The testing of the election systems by the CCBOE before the May 2nd election suggests an awareness on the part of the CCBOE that the L&A tests were not designed to expose significant flaws in the systems. The tests took place in the 2 weeks preceding the May 2nd election—scarcely enough time to complete testing of all machines, much less make arrangements to fix or replace machines should any significant number of DREs fail the tests. The transmission tests that took place over the weekend immediately prior to Election Day was also hurried and left no time to address failings exposed by the testing. [CCBOE testing protocols and schedules; interviews with

IS and warehouse staff, Director Vu and Deputy Director Dillingham; testing protocols; statements of testers; email between CCBOE management and staff and project manager for Cuyahoga County]

2.126 Finding: The CCBOE's execution of the L&A testing undermined the tests because, being performed so close to Election Day, CCBOE workers were forced to work long shifts for extended periods, often without recognition or adequate compensation. As the tests went on, employee fatigue made errors more likely while the hours took a toll on morale. [Interviews with IS staff; Deputy Director Dillingham; Kaluscak]

2.127 Recommendation: The CCBOE should ensure that all performance tests are sufficiently rigorous, and performed on a schedule that will allow the CCBOE to respond to test failures and workers to work sensible hours. Testing procedures at all levels should be documented and published, with specific criteria for passage and failure. [GAO Report#: GAO-05-956, p26, 37-38, 42; NIST SP 800-34: Contingency Planning Guide for Information Technology Systems (June 2002); NIST SP 800-61: Computer Security Incident Handling Guide (January 2004)]

2.128 Finding: Nearly all DRE testing is done in "test mode," a software configuration that purports to simulate the behavior of the machine during an election, without creating official "voted" ballot records. [DESI hearing; interviews with IS staff; DESI documentation]

2.129 Recommendation: Whatever the benefits a "test mode" may offer, it is not testing in "election mode." The execution of different software code (however similar or overlapping) for testing and actual elections voting reduces the authenticity of the tests undertaken. Moreover, not testing in election mode creates a significant risk of masking buggy or malicious code that may be invoked in an election but bypassed in test mode. All L&A testing should be performed in election mode on DESI DREs, if the machines can be configured for this.

Testing by vendors

2.130 Finding: Even the most responsibly engineered software systems contain numerous bugs and areas of functionality that are not exhaustively specified. Good software is a perpetual work-in-progress. Both the CCBOE and, subsequently, this Panel, have faced a lack of candor on the part of DESI with respect to defects and limitations in their systems. DESI states that the problems experienced in Cuyahoga County in trying unsuccessfully to integrate DIMSnet and GEMS were entirely due to failures on the part of the CCBOE. DESI describes the extrinsic security measures and policies required for operation of GEMS simply as prudent steps for security of any computer system, without acknowledging that many are directly necessitated by the lack of intrinsic security features within GEMS. DESI's DIMSnet personnel claimed that they do not issue releases of the DIMSnet software containing any bugs known to them. [Interviews with CCBOE staff, DESI representatives, hearing with DESI representatives, DESI website; interviews with IS Department, Ballot Department and CVS staff]

2.131 Recommendation: Representations that an election software system is without defects, while perhaps intended to be reassuring, should be greeted with alarm for they evince either ignorance of engineering realities, or deceit. Proper, ongoing maintenance of software systems should include solicitation of possible bugs identified by users and other interested parties, and speedy resolution of those possible bugs by the vendor. To make their systems worthy of public confidence, election systems vendors should invite all who are qualified, and willing to offer their time, to test their products. Vendors with an ongoing commitment to improving the quality of their election systems should welcome scrutiny and provide access to their election systems, without necessarily disclosing source code or other intellectual property, and acknowledge and address defects as inevitably they are discovered.

Recommended Areas for Future Inquiry

1. Does the Secretary of State's DXI system support the voter registration lookup system that is on their website?
2. What are all of the problems with the voter registration lookup system?
3. Are problems with the registration lookup system indicative of problems with the DXI system?
4. In what ways can the DXI system potentially compromise or cause problems with the CCBOE's voter registration system?
5. Does the Secretary of State's usage of the DXI system limit the county's potential choices for voter registration systems?
6. What incentives are there for Board of Election personnel to eliminate duplicate voter registration records on the DXI system when other counties will eventually resolve the problems?
7. What are the procedures for dealing with all the "dead weight" or accumulated records that are kept in the system indefinitely?
8. DESI offers an application called VC programmer. This application needs to work with both DIMSnet and GEMS and is used for the Ballot on Demand service. The representations that were made about this service and the Ballot on Demand service are of particular interest. Did the CCBOE know that they would have to purchase VC programmer in order to get the full functionality of the Ballot on Demand service?
9. A full investigation should be launched regarding the DIMSnet/GEMS data transfer training program. According to DESI's Tim Murowski both Richland and Fairfield Counties attended this training program and had no problems transferring data from DIMSnet to GEMS. CCBOE staff should contact these

- counties to determine if they found that the DIMSnet to GEMS transfer was as easy as Tim Murowski claims.
10. A complete list of people who have had access to the GEMS server must be compiled. We know that the entire ballot creation staff had access and perhaps some IS staff. Procedures surrounding access to GEMS should be carefully examined.
 11. The Secretary of State's practice of only certifying two vendors of voting machine equipment needs to be investigated. Formal inquiries of the Secretary of State's Board of Voting Machine Examiners should occur in public meetings for full accountability.
 12. The Secretary of State's Digital Guardian system should be analyzed. The system seems unsuited and impractical as a security precaution.
 13. The Secretary of State's requirement that GEMS not be networked to any computer should be regarded as impractical for a county as large as Cuyahoga County. A properly created secure and managed local network of two to three computers is just as safe as having the GEMS server not be connected to any other computers. Because of Cuyahoga County's size and complexity, an analysis must be completed to show whether that this requirement is impractical.
 14. The software limitations of the GEMS server need to be further analyzed.
 15. A full investigation should be undertaken to determine whether DESI's DIMSnet staff is adequate to provide required support to their growing customer base. In an interview with DESI DIMSnet staff Ross Underwood, Mike Lindross, Tim Murowski and counsel on 7/7/2006 we were told that DESI's DIMSnet operation has twenty full time employees, six of whom which are software programmers. This staffing seems far too low considering that DIMSnet serves fifty-five counties in five states.
 16. More investigation should be done regarding DESI's DIMSnet staff error tracking procedures and reporting systems. In an interview with DIMSnet staff Ross Underwood, Mike Lindross, Tim Murowski and counsel on 7/7/2006 no list of known software issues because none exist. For a software program as complex as DIMSnet it seems impossible that there would be no known software problems.
 17. Investigate what happens to information on the memory card when it becomes full. The GAO's report on this problem states that votes can potentially be overwritten when the card reaches its capacity. The CCBOE must determine how many votes can be cast per memory card on an election to election basis as the amount of information stored in one ballot is subject to change for every election.

18. A full list of DIMSnet considerations should be compiled by contacting the head of each CCBOE department, asking them what features they would like to see in DIMSnet. A full analysis should be done to determine what potential this has to disrupt elections in Cuyahoga County.
19. The Secretary of State's DXI system should be fully analyzed and scrutinized. The Secretary of State claims that if there is an inadequate buffer between the state run database and the county's system to prevent interference. This should be verified and the State's DXI system should be fully investigated.
20. An independent, qualified consultant should be retained to conduct a study of whether the DESI DRE and absentee ballot optical scan combination can be effectively and efficiently implemented for Cuyahoga County's elections. The study should consider:
 - Functionality of hardware and software;
 - Interoperability of registration software
 - Policies, procedures, staffing, training;
 - Security risks of various options;
 - Comparative costs and benefits of other available systems

The CERP's preliminary assessment is that a single voting system used in both the polling locations on Election Day and for absentee ballots is preferable.

21. CCBOE should investigate carefully whether the ballot rotation functionality built into GEMS actually performs what is required. At the 6/29/2006 Hearing, DESI refused to disclose what steps it had taken to ensure that the ballot rotation built into its GEMS complies with Ohio law; this needs to be examined closely.

Chapter III: Election Planning and Implementation

Background

The CCBOE's election planning process for the e-voting conversion began in earnest after the SOS announced in April 2005 that the Diebold TSx units with the new voter verified paper trail printer would be available as an approved HAVA compliant e-voting technology. This approval pleased Director Vu since he had not invested any time in reviewing the optical scanning technologies. Vu then pursued strategies for obtaining additional DRE units, favorable performance terms, and ancillary equipment. Deputy Director Dillingham managed the planning process for the conversion. The CCBOE did not receive a list of all equipment needed for the transition, and its managers were not aware of the types of decisions — including procurements large and small — that were required. After having difficulty researching the procurements because the predicate policy and procedural decisions had not yet been made, Fiscal Officer Lisa Durkin suggested that the CCBOE undertake a comprehensive implementation planning process by which the managers would make these decisions. Procurement would then follow the policy decisions. Since the Deputy Director had been named CCBOE Project Manager for the e-voting conversion, she determined who would lead the implementation decisional process. She tapped Kathy Dreamer and Administrator Maiden for these primary roles.

During the summer of 2005, these teams commenced their work. But in retrospect the planning process has been severely criticized as lacking direction by knowledgeable leaders experienced in such conversions. As one manager put it, "it was the blind leading the blind." The CCBOE had not secured consultant services, and its top managers believed that all the guidance they needed was to be supplied by Diebold as a part of the Master Contract. As detailed in Chapters I and II of this Report, the Diebold State Project Manager Jessica Hiner did not view consultant services for the conversion as a part of the package of goods and services negotiated by the Ohio SOS but wanted additional compensation for any consultant services.

Enlarging the focus beyond the planning for the May 2nd election, the Panel discovered that the CCBOE has persistently experienced Election Day problems that, with better planning, should have been eliminated or greatly diminished long before the challenge of e-voting. The planning and election preparation issues concerning polling places and poll workers receive extended discussion in Chapter IV. Other issues that predominantly concern CCBOE managerial skills and focus are addressed in Chapter VII. Vendor, technological planning and related procurement issues are addressed in Chapters I and II. Planning for the actual management of the May 2nd Election Day and for other e-voting elections is addressed in Chapter V.

Given the detailed attention to other aspects of election planning in the Report's other Chapters, this short chapter addresses only a narrow and unique set of issues that otherwise might be unaddressed: were there any early warnings to the CCBOE of

possible pitfalls and even land mines to be avoided in the conversion to e-voting? If so, what kind of response, if any, did the CCBOE take to modify its preparation and planning process so as to sidestep the worst and achieve the best possible first e-voting election? Were there steps that the CCBOE should have taken to have better prepared itself for the procurement decisions as well as for any other issues?

Warnings of potential disasters not taken seriously

3.1 Finding: Diebold contracted with Sogeti USA to supply a Project Manager for the Cuyahoga conversion. Sogeti named Joe Nista as the Manager. In early January 2006, Nista alerted Director Vu and Deputy Director Dillingham to thirteen potential major risks that concerned him regarding the May election:

1. A single Tech Support person may not provide sufficient technical coverage for the May election because of device count volumes... and the fact that the warehouse and the GEMS server are in different physical locations.
2. Modeming failures may occur on election night.
3. Accumulation failures may occur on election night.
4. Poll-workers may not sufficiently understand new election processes and/or equipment.
5. TSX devices may not be completely and properly discharged/charged 3 times prior to start of L&A testing.
6. TSX devices to be used for Absentee voting may not be ready in time....
7. County staff may not be able to fully support the use of TSX and OS devices on election day.
8. Printed ballots may not be available for the open of Absentee Voting on March 28 due to insufficient time available between the time the ballot is approved and the time the physical ballots are proofed and printed.
9. TSx electronic ballots may not be ready in time for the open of Absentee Voter voting (March 28) due to insufficient time available between the time the ballot is approved and sent to the audio vendor and the time the audio ballot is received, proofed and finalized into GEMS.
10. Printed ballots may be unscannable by OS devices on election night.
11. Election media memory cards may not be returned to the CCBOE on a timely fashion on election night.
12. An incorrect number of TSX devices may be deployed to polling locations.

13. Confusion may occur on election night relative to roles and responsibilities for:

- a. Collecting and accounting for returned supplies including memory cards
- b. The process for returning memory cards to CCBOE and uploading results to GEMS
- c. Producing GEMS election night reports
- d. Producing a GEMS extract to the county web site
- e. Accounting for and storage of memory cards already uploaded
- f. AV ballot processes including opening Absentee Voter mail, flattening ballots, sorting by ballot style, prepping for canning [sic], scanning ballots, etc.
- g. The process for handling help/trouble calls on election night (documenting, tracking, servicing etc.)

The above list accurately predicted many of the most troubling aspects of the CCBOE's performance in the May primary election. [Nista email to Director Vu and Deputy Director Dillingham 1/3/2006 containing the list "Potential Risks for the Cuyahoga May Election"]

Despite a variety of efforts, the Panel has been unable to locate records or obtain interview recollections that suggest the CCBOE Implementation Teams or other core planning entities engaged in any systematic review and counter-planning to guard against these contingencies occurring. Thus we conclude that Nista's email was not taken seriously in the CCBOE.

3.2 Recommendation: Before Cuyahoga's effort, e-voting conversions had occurred for several years around the nation, with very different track records of success. The CCBOE top managers should have been well apprised of the grave risks even without the Nista email. But Nista's message can be seen as a wake-up call for the CCBOE to become serious and focused on ensuring that the nightmare occurrences he listed would not materialize in the County. A review of the available evidence indicates that Deputy Dir. Dillingham did not consider these realistic possibilities for this County's elections, and so was not persuaded that any special planning and trouble-shooting needed to occur to avoid these problems. By not confronting these potentialities head on, the CCBOE was left unprepared for the ensuing nightmare election. By our count, at least ten of these thirteen worst scenarios occurred but possibly as many as 12 of 13, depending on the interpretation/scenario embedded in a few propositions.¹¹ Managerial over-confidence prevented the CCBOE from preparing properly to avoid the potential risks. Any future planning must occur from the outset, and must not be hastily assembled in reaction to unfolding adverse events.

¹¹ This count did not inventory the seven disastrous subheadings collected under the last category, where Cuyahoga also achieved yet another high batting average – realizing six of seven possible problems.

3.3 Recommendation: When risk predictions of this magnitude exist, they should be thoroughly and individually analyzed in a “reverse-engineering” process so that all the potential causes that can lead to the occurrence of each unsavory outcome can be charted. Then careful avoidance planning and contingency planning must occur rather than taking a blasé, overconfident approach that all missteps will be avoided. Based on his prior experience in project management and implementation of electronic voting systems, Nista foresaw major difficulties ahead. But it seemed no one was listening.

3.4 Recommendation: Election planning must not only anticipate all possible disasters and plan to avoid their causes, but also build in “buffer time” to take care of unexpected contingencies. The entire election calendar should be geared so that a full week remains after all tasks have been completed. This last week then allows for dry-runs of procedures, trouble-shooting, and quality control in all aspects. Staff can become well rested before Election Day, so they have maximum energy and their best judgment for handling any untoward occurrences. In sum, as a part of the November 2006 planning process, special care must be taken to address known risks such as those presented here by Nista. Complete planning for follow-up and risk avoidance must be formalized, executed, and documented to be complete well in advance of any election. Tasks will need to be performed earlier and more efficiently in preparing for Cuyahoga County’s next electronic election.

Logic and Accuracy testing must be more carefully planned

3.5 Finding: Director Vu stated in a 7/14/2006 interview that he realizes the L&A testing he ordered before the May primary was too extensive and complicated. Given the opportunity to do the testing over, Director Vu would have ordered less extensive testing. In deciding to run do comprehensive tests, Vu consulted Judy Grady and Pat Wolfe of the SOS office and with counsel Reno Oradini, as to the extent of testing required by law. In a memorandum listing state Best Practices, Grady instructed Boards of Election to “(m)ake sure your L&A Test accounts for every possible ballot position in every possible vote combination... This may seem tedious, but it is extremely important. A written test script that allows L&A testing to confirm only the proper number of votes for the proper positions will pay huge dividends.” In considering how to realize Grady’s instruction, Vu determined that the internal DESI DRE L&A test was insufficient because it did not involve actual human input via the touchscreen. [Interview with Director Vu 7/14/2006; Joe Nista Progress Reports; Judy Grady Memorandum Re: Pre-Election Logic and Accuracy Testing; emails between Vu and Reno Oradini 4/13/2006-4/19/2006]

The extent of the L&A testing done before the May primary was intended to satisfy the SOS Best Practices and the legitimate concerns of the voting public. When the task of complying with these stringent SOS requirements for L & A testing were combined with the multitude of separate jurisdictions and required ballot styles in Cuyahoga County, the situation quickly cascaded into a situation that demanded 12-hour workdays and little availability of key staff during the critical two weeks before the election. [Interview with Director Vu 7/14/2006; Joe Nista Progress Reports; Judy Grady Memorandum Re: Pre-Election Logic and Accuracy Testing; Interviews with Managers]

3.6 Recommendation: By the time L&A testing could begin, after the DIMS-GEMS data transferal had been completed and validated, the CCBOE was already well behind schedule. Given that the Ballot Department problems with the GEMS-DIMS interface had consumed all of the buffer time in the schedule plus more, placing the CCBOE behind schedule, Director Vu should have opted for less arduous and less time consuming L & A testing. Given that under the Diebold DRE system the L & A testing is not able to be performed in actual “election mode” but only in “test mode” (and thus lacking the integrity of testing under the software commands that would be operative on an Election Day), expending this huge amount of time did not make good sense. Memory cards cannot be prepared until the filing period is over but have to be created and available for the DREs to be L & A tested. In a county as complex and large as Cuyahoga, it may not be possible in the exceptionally short period available to conduct the complete L & A tests that would be most highly recommended for ensuring the accuracy and reliability of the DREs. This is yet another factor that should be taken into account in deciding whether the DREs are well suited for Cuyahoga County. Speeding up the data transferal process between GEMS and DIMS would reduce the schedule compression but given the size of the County, any county-wide election would still place great pressure on the staff to complete meaningful L&A testing before the DREs are deployed to the polls.

3.7 Recommendation: The Director’s desire to achieve the highest standards in operational testing of the DREs is laudable. Unfortunately, the Diebold DRE’s artificial context in which the L & A testing would be conducted should have led the Director to seek a less aggressive and time consuming L & A approach. The CCBOE should explore the L & A methodologies that are being used by the other most populous Ohio counties, and also by other metropolitan counties nationwide which are using Diebold DREs. It should consider retaining an independent voting systems consultant who can advise the agency on the pros and cons of various L & A methods. After deciding on the best approach for the County in light of all the factors, the CCBOE should seek SOS approval for the method(s) it has selected.

3.8 Recommendation: As mentioned earlier in the Report, Diebold should reconfigure the DREs so that they can be tested in “election mode” and yet securely protect against the generation of false votes stored on a memory card.

Security seals must be recorded and the security system perfected

3.9 Finding: The CCBOE uses as many as 13 different numbered seals for outbound and inbound equipment materials and supplies, not including “tamper” or “void” tape seals. Currently none of the seal numbers are recorded, either outbound by CCBOE staff, or inbound by poll workers as items are unpacked for use at the polls. Failure to record seal numbers breaks the chain of custody in determining if a device or bag has been tampered with. [Site visit to the CCBOE warehouse and interview with the Deputy Director Dillingham and Election Support Manager Kaluscak 6/1/2006; Email discussion with Joe Hall]

3.10 Recommendation: Admittedly, given the volume of materials returning to the Board on Election Night, the security processes must be thought out exceptionally well or the steps will create a bottleneck in the efficient processing of memory cards and optical scan ballots. At a minimum, however, the CCBOE must assign and record the outbound seal numbers on the DREs, the red/blue supply bags, and the “void” tape seals on the memory card doors and the modem doors. The poll workers (Judges or “Booth Officials”) must record all seal numbers on clear memory card bags, green bags, red/blue bags, and DREs. Inbound from the polls on Election Night, the CCBOE should record the seal numbers on the red/blue supply bags and the clear memory card bags as they arrive. The seals on the green bags containing the VVPAT canisters should also be recorded but that is not an imperative for the CCBOE on Election Night. Seal numbers on the DRE modem door, however, should be recorded upon the units’ return to the warehouse.

3.11 Recommendation: Sufficient, competent, permanent, well-trained, and scrupulously honest detail-oriented CCBOE staff must be placed in charge of tracking the security chain of custody for all items and reporting on any failures.

3.12 Recommendation: To facilitate the processing of materials on Election Night, the CCBOE should investigate the availability of scannable seals on all outbound and inbound materials, parcels and devices.

3.13 Recommendation: To help assure that no one has tampered with the results in the DREs or memory cards while poll workers transfer them to the transmission site or to the CCBOE, the CCBOE should implement another control besides the seals placed on the bags. Specifically, the CCBOE should make available on its website a list of each DRE’s results organized by polling location, and also the results by voting location. We also recommend that the DRE results be posted at each polling location on a VVPAT printout. This combination of data would allow interested parties or voters to verify that the results posted at a polling location are the results that the CCBOE uses in its official and unofficial tallies. Currently, however, the Diebold GEMS software does not permit the tracking of votes by DRE unit, but this omission should be a matter of public and CCBOE demand for software modification to protect against forms of election fraud. (see Chapter II and Chapter VI Ballot Count and Post-Election). Maximum public accountability should be sought in the planning and reporting of election results.

3.14 Finding: The Security Event Log was the form to be used by poll workers to record security seal numbers and ballot totals for each machine. The top section is subtitled “BEFORE POLLS OPEN” and includes fields to match up DRE serial numbers with canister seal numbers, memory card slot tamper tape numbers, and DRE ballot totals. The middle section, “AFTER POLLS CLOSE,” is identical except that it lacks fields for tamper tape numbers. The bottom section, “RECORD THE SEAL NUMBER AS YOU SEAL EACH BAG,” has a grid listing four seal locations, the memory card bag, the canister bag, and the top and side of the supply bag. All four include a space to record seal numbers for election night, while the supply bag also has fields for election morning and the top of the supply bag has an additional field for a Monday night seal number.

Examination of a sample set of Security Event Logs from May 2nd (239 Logs) demonstrated that there was widespread confusion by poll workers as to how the Logs were to be filled out. Use of the fields and boxes was sporadic and subject to variation. Many poll workers created new columns or fields of their own to record seal numbers they felt should be kept but were not provided for on the form. Of the 239 Logs examined, 86 displayed some form of spontaneous modification or creative misuse by poll workers. Comments about technical problems and supply shortages were written in various margin areas, indicating that poll workers knew of no other formal mechanism for reporting these issues. Tamper seals were affixed directly to some forms. Starting ballot totals (which should always be confirmed as zero) were almost never recorded, and ending ballot totals were missing on 88 out of 239 Logs examined. Following are the comments that appeared on this sample of Logs:

- RIHT-03-C: “Printer is printing half of info and showing abort sign. No longer using as of 10:42 AM”
- RIHT-03-B: One DRE machine “not sealed, not used”
- SHV-03-B: “This machine was out of order all day”
- SEVC-02-A: “I had to use blue seals because I didn’t have enough red”
- SEVC-04-C: No seals available for supply bags Monday night
- MPHT-03-C: No seals for last canister
- MPHT-05-A: No ballot total because “machine locked up”
- MAYV-03-A: No ballot total because “no such instruction given in manual”
- MAYV-03-A: “Didn’t have enough seals”
- OAKV-01-A: Not including ballot totals because “not taken from screen at proper time” per instruction from the CCBOE
- ORNG-00-A: “Could not unlock” memory card door
- LAKWD-04-A: No ballot total because “the man from Diebold had us close up the machines and the total are [sic] lost”
- LAKWD-04-B: “Only one out of three machines had a tag”
- LAKWD-04-B: “Zero machine... not working. Replaced”
- LAKWD-01-D: Memory card tamper tape “was removed” before poll opened
- LAKWD-01-G: Seal number 921768 “broke trying to put it in”
- LAKWD-01-J: “No one here to help with closing, did the best we could”
- ECLE-03-E: First seal broken on memory card door
- BRKV-00-L: “Did not send enough” supply bag seals
- BRTNL-00-A: Supply bag seal damaged
- BRTNL-00-A: “Problem with paper” on one printer
- BRTNL-00-A: “Machine didn’t work” reported for two other machines
- CUHT-00-A: “Had no more seals”
- BERE-02-B: Canister seal “broke open because the paper ripped”
- BERE-04-C: “We didn’t have seals to send machines after taken down”
- BERE-04-C: “Machine shut down too soon” to get ballot count
- BERE-04-D: “?” entered for ballot totals
- CLEV-21-V: “Machine didn’t work”

- CLEV-20-L: One canister “did not work”
- CLEV-20-L: One machine “fixed,” no explanation of problem
- CLEV-14-K: “Instructions weren’t given to match memory card with serial number on back of machine. Thus they do not match and rather than mess up the ballot numbers, we did not switch them as advised”
- CLEV-14-Q: Absolutely blank, nothing filled out
- CLEV-03-M: “Not enough locks”
- CLEV-03-U: “Problem with this machine”
- CLEV-05-D: “No blue seal” on one memory card door
- CLEV-05-D: “Not enough seals”
- CLEV-05-S: “Ran out of time”
- CLEV-05-T: Absolutely blank, nothing filled out
- CLEV-05-U: Absolutely blank, nothing filled out
- CLEV-07-H: “NA” entered for ballot totals
- CLEV-03-M: “Not enough locks”
- CLEV-01-T: “Malfunction” of one machine
- CLEV-03-A: “We didn’t have enough seals”
- CLEV-03-G: “Do not get number” for ballot totals

3.15 Recommendation: Tracking of seal numbers must improve before the next election. The Security Event Logs should be redesigned with clearly marked and clearly explained fields for all security seals. Use of the new form should be covered in poll worker training and testing should occur to make sure that crucial security procedures are understood and followed. Failures to fill out the form on Election Day need to be addressed directly with workers from that precinct, so that the importance of physical security and chain of custody are understood. Poll workers should be provided with a separate form for reporting equipment or supply failures. After the election, a member of CCBOE management should audit all Security Logs and present a report to the Board listing every anomaly. These anomalies should be followed-up and reconciled before the next election, and any hardware that experienced gaps in its chain of custody should be quarantined until it has been checked for tampering. Recording of ballot counts, especially the confirmation of zero counts before polls open, is critical and should be stressed in training as well. These counts should be totaled and reconciled with poll books and with GEMS totals after uploading is complete.

3.16 Finding: The CCBOE, operating at the direction of the Secretary of State, did not begin delivering the memory cards to individual polling places until the day before the May 2nd Primary Election. According to CCBOE staff, for a variety of reasons some polls’ memory cards could not be delivered on Monday. As a result these cards had to be delivered on Election Day morning starting at 5:00 am. This impediment caused two separate problems that undermined the possibility of achieving a smooth, successful election. First, it required experienced CCBOE staff to spend all day Monday and part of the early morning hours on Tuesday delivering memory cards. The second problem was that at least 50 precincts were not supplied with the memory cards at the right time,

delaying the initiation of DRE machines and thus the polls opening on time in these polling locations. [Staff interviews; On-site inspections of the warehouse facility on 6/1/2006; Analysis of Incident Reports]

3.17 Recommendation: This memory card problem is not a problem unique to Cuyahoga. Other election jurisdictions with far greater experience than this County have dealt successfully with this problem. The CCBOE should research the strategies employed by other election jurisdictions that use DREs. The agency should also place this problem on the list for advice from a highly qualified election systems security consultant. The obvious possible solutions may introduce other unacceptable risks into the system (such as security risks that could infect the entire GEMS system), but we mention: (1) permission from the Secretary of State to seal the memory cards into DRE voting devices immediately after the L&A testing (using a recorded numbered seal and shrink-wrap of the machines) or (2) deployment of more reliable delivery and DRE set-up personnel on Election Day morning who would hand-deliver the memory cards and also assist with initiation of the DRE units; (3) sending the memory cards to the most reliable Presiding Judge for hand delivery to the polling place. Each of these strategies includes risks for the polling place not being able to open on time. But this is yet another factor that must be considered when the County reassesses the voting machine system most appropriate for this County.

Effective planning for local budget responsibility and potential liabilities

3.18 Finding: The Secretary of State negotiated its Master Contract with Diebold without involvement of the CCBOE and perhaps without any BOE representation. While involving up to 88 separate counties in a contract negotiation would introduce waste and delays, involving a small set of representatives of various sized and situated BOEs might have helped the SOS to avoid some of the omissions that have injured the planning and budgeting by BOEs and County Governments. [Director Vu to Board Members, 11/10/2005; Amendment to SOS Master Contract; Interviews with Director Vu]

3.19 Recommendation: Because of the complexity of the County's voting configuration, Cuyahoga County and the Secretary of State must develop ways to work more closely with one another to ensure that electronic voting is a success. The election process cannot succeed if the Secretary of State makes substantial changes without listening to, or appreciating their effect on, local Boards of Election.

3.20 Recommendation: While the HAVA legislation provided federal funds to upgrade voting systems, it did not seek or compel the outsourcing of election management to private voting machine manufacturers and vendors. Yet this seems to be the path on which Ohio and much of the nation seems to be moving, for the county BOE executive managers generally lack the high level technological training and experience with election software and e-voting issues that would allow them to fathom the subtleties of how and whether the systems are working accurately. The move to e-voting seems to have placed the BOEs and public into a position where we are asked simply to trust that the tabulation software is accurately reporting election results, that the DREs are

accurately recording and reporting votes, and that the ballots that are electronically created are properly reflecting Ohio ballot rotation law. The State and county BOE planning processes must begin including mechanisms that will permit far greater public accountability of election tabulations with independently verifiable results. A State Elections Inspector General should be contemplated to assist the county BOEs in ensuring that the e-voting systems fully achieve the public trust in honest, accurate elections and that the election planning and execution culminate in total integrity and accountability.

3.21 Finding: The CCBOE skipped conducting important research on other jurisdictions that had previously used DESI systems when it was involved in planning its ancillary equipment purchases. On 12/29/2005, an election official from Montgomery County, Maryland offered several observations concerning issues that Cuyahoga County could and should have foreseen before negotiating its proposed local agreement. [Email, Lisa Durkin to Director Vu, 12/29/2005, Subject: Diebold Contract] For instance, printer paper rolls are standard calculator tapes that can be purchased off the shelf, as opposed to being purchased from DESI; and many of DESI's items, such as encoder batteries, are available at much cheaper prices from other vendors. Many of these recommendations could have been discovered simply by calling other counties and asking what ancillary equipment they had purchased to implement their Diebold DREs. Instead, the CCBOE's failure to consult other jurisdictions cast doubt on its due diligence in voting machines and ancillary equipment procurement and planning. [Email, Lisa Durkin to Director Vu, 12/29/2005, Subject: Diebold Contract; Amendment to SOS Master Contract]

3.22 Recommendation: Other jurisdictions that have worked with a major vendor are often willing to share their successes and failures, and the benefits of hindsight. The CCBOE should have been far more assiduous in developing these relationships and lines of inquiry, especially with election officials who had years more experience with the same vendor. It is regrettable that the CCBOE executive managers did not aggressively seek out Maryland and California officials' views about their Diebold procurements and the course of their relationship with the vendor so that the CCBOE could function as better negotiators for and protectors of the County's best interests. In the future, the CCBOE should seek out this knowledge from other jurisdictions else it will inevitably be at a disadvantage in negotiations with experienced vendors.

Ensuring privacy for absentee voters

3.23 Finding: The current method used by the CCBOE for absentee voting is to require the voter to record his/her vote on an optical scan ballot. After recording their votes on the optical scan ballot, the voter inserts the completed ballot into the "Identification Envelope Statement of Voter" envelope (Form No. 12-A-OS Prescribed by the Secretary of State). The voter fills in the required personal information and signs the statement on the envelope. On or immediately before Election Day the CCBOE verifies the authenticity of the voter and opens the envelope. The major concern with this procedure is that an employee can clearly see how any individual absentee ballot is cast. [Walk-

through of the absentee ballot process at the CCBOE and information provided by CCBOE staff]

3.24 Recommendation: Once completed, the absentee optical scan ballot should be placed in an unmarked solid white envelope for purposes of confidentiality. This envelope would then be placed in the current voter identification envelope. Adding this additional envelope would enable the CCBOE to authenticate the legitimacy of voters while still protecting voter anonymity.

Voter education

3.25 Finding: The voter education campaign is currently limiting their educational plan to three or four messages. Limiting the number of messages based on theories of advertising may deplete the effectiveness of the educational side of voter education. The project is currently not a year long effort, but rather an intensive campaigning effort close to major elections. The “Pink Sheets” indicated a large amount of confusion over provisional ballots on the part of poll workers as well as voters. Voters need to be informed and educated about when they are entitled to cast a ballot provisionally and how to properly fill out the paperwork when doing so. [Interview with Community Outreach; Incident Reports]

3.26 Recommendation: The voter education campaign should be reevaluated to become more of an “educational program” rather than a “marketing campaign.” The project needs to be able to incorporate more messages to fully educate the public, including rights regarding provisional voting. Instead of briefly focusing on a few messages over short periods of time, the CCBOE could develop a year round program that educates the public on various Election Day topics. The electoral process occurs on a regular basis, and it may be more effective to properly educate the voters rather than reeducate the voters on the same issues during each election. Voters should be made aware of their right to a provisional vote and the proper procedure for filling out the appropriate paperwork.

3.27 Finding: Currently the “official voter information guide” mailers are sent out without enough time to inform voters of their ability to vote by mail through an absentee ballot. The mailers, which include instructions on how to vote by absentee ballot, cannot be sent out until the updated list of registered voters is published. This list is currently not available until approximately two weeks prior to the election.

3.28 Recommendation: The list should be made available earlier to the CCBOE Human Resources staff. Human Resources recommended that two rounds of mailers should be sent out. The first round should inform voters of their right to vote by absentee ballot. The first mailer should also ask voters to update their voting information if it is not correct. The second mailer should include Election Day procedure and inform the voter of the polling location. This second mailer will also include the requirements of H.B. 3 and list the acceptable forms of identification a voter will need at the poll in order to cast a ballot. The CCBOE needs to “test-run” all letters, flyers, and other proposed advisories

with representatives of advocacy groups and members of the public to ensure that its communications educate rather than frighten or confuse.

3.29 Finding: DRE demonstrations were held by the CCBOE to introduce electronic voting to the general public. The DRE demonstrations included instruction on how to use the machines. They allowed voters to actively participate in the process by allowing them hands-on interaction with the new technology. The DRE demonstrations were staffed by the Community Outreach Department and used temporary workers. Occasionally a representative from the Booth Officials Department would be sent to hand out recruiting information at the demonstrations.

Voters repeatedly asked for receipts of their votes. The CCBOE did not adequately inform voters of the paper trail and the ability to review their vote before their ballot was cast. The poll workers indicated aggravation with the repeated questions regarding the paper trail. Repeated questioning about the same issue displays a failure on the part of the CCBOE to adequately inform the public about the ability to view the paper trail associated with electronic voting. [Incident Reports; Community Outreach DRE surveys]

3.30 Recommendation: Before future elections, the CCBOE should inform voters that they are able to view their selections but will not receive a paper receipt from the printer. They should also explain why no paper receipt is provided. More education about what to expect once a ballot has been cast should be incorporated into the voter education campaign. More DRE demonstrations would be a good way to inform more people about the capabilities of the machines.

3.31 Finding: The grass roots characterization of the community outreach plan could include more aspects of voting, including registration and recruitment of poll workers. The community outreach department had DRE demonstrations at local malls, banks, and grocery stores. The current scope of the voter education program, however, is limited and could be expanded to include more general concepts of elections, including the importance of civic participation. Lorain County targets college students and Hispanics through their voter education plan. Lorain, Franklin, and Montgomery County target senior citizens through voter education. Franklin County specifically targets inner city voters. [DRE demonstration project plan]

The voting population needs to be informed about the importance of civic participation. Civic participation is an important element in voter awareness and recruiting issues. This issue is currently not included in the voter education plan and is not covered in the community outreach materials. [Interviews with Booth Officials employees]

3.32 Recommendation: Civic participation should be made a larger part of voter education. The public should be well informed of the need for people to work the polls, and the importance of poll workers' roles in the electoral process. The general public should be informed through various facets of media exposure and community outreach efforts.

Community Outreach efforts could also inform local business leaders and government employees of electoral participation opportunities as poll workers and in other positions. Efforts could encourage interested citizens to donate their time or services to the electoral process and help to make Election Day in Cuyahoga County a success.

3.33 Recommendation: The grass roots concept of the community outreach program is a good idea. Saturating the voting population through numerous site locations is critical to educating and informing such a diverse audience. The voter education should cater to the specific needs of the smaller enclaves that exist within Cuyahoga County. These populations may need further investigation so that community outreach efforts can be more specifically targeted to their needs. The expansion of community outreach materials could also not only be greatly beneficial in recruiting, but in making the community aware of the significance of poll workers. This may induce more public respect towards Booth Officials. Broader Election Day education could also be used as a tool to rebuild voter confidence.

3.34 Finding: Ohio legislation recently made absentee ballots accessible without requiring voters to state a reason for needing one. Voters now have the option of voting by absentee ballot rather than going to the polls to cast their ballot. Many problems associated with absentee ballots were encountered in the May 2nd election. Proper procedure associated with absentee ballots is essential. Voters must be educated on how to properly complete an absentee ballot to ensure that their vote will be counted. Numerous reasons exist for rejecting absentee ballots. These reasons include:

- Statement accompanying an absentee voter's ballot is insufficient;
- Signatures do not correspond with the person's registration signature;
- Applicant is not a qualified elector in the precinct;
- Ballot envelope contains more than one ballot of any one kind, or any voted ballot that the elector is not entitled to vote;
- Stub A is detached from the absent voter's ballot; or
- The elector has not included with the elector's ballot any identification required as referenced.

These reasons are all stated on the CCBOE website. Most but not all of these problems are mentioned in informational pamphlets.

3.35 Recommendation: Larger efforts need to be taken in educating the voting population on their ability to vote absentee. Specific groups who may have a greater need to vote by absentee ballot should be targeted and informed of this option. Voters also need to be educated on how to properly complete an absentee ballot. The importance of proper completion should be emphasized because if a ballot is not completed properly one can not be assured that his or her vote will count. Voters also need to be assured that absentee procedures are reliable. Voter confidence must be restored because of the problems with the ballots in the last election.

3.36 Finding: H.B. 3, passed earlier this year, will require all Ohio voters to present some form of identification at polling places beginning in November. This bill could create major problems at the polls if voters are not aware of the ID requirements associated with it. A large effort to inform voters of the requirement and the proper forms of ID that are necessary to vote will have to be undertaken to educate the public for the November election. Voters should be informed of their ability to vote provisionally if they have forgotten their identification, but also forewarned that they will have to then prove their identity within ten days or their ballot will not be counted. The Greater Cleveland Voters Coalition presented testimony at an advocacy group forum concerning the public's need to be educated on the requirements of the Bill. Without education, the Coalition believes H.B. 3 will lead to the disenfranchisement of many voters, and that the I.D. requirement will disproportionately affect specific segments of the populations such as the elderly and various minority groups.

3.37 Recommendation: The CCBOE must inform and educate the public on the identification requirement. They should use various forms of community outreach to make the public both aware that ID will be required to vote and educated on proper forms of ID that can be used at the polls on Election Day. The CCBOE should encourage voters to obtain an ID prior to voting through education of the requirement and assistance in obtaining a proper form of identification. The CCBOE could also coordinate ID distribution drives with the Bureau of Motor Vehicles prior to the election.

3.38 Recommendation: The Ohio Secretary of State and the General Assembly should revisit the provisions requiring voter ID at the polling place. The current provisions trouble the Panel greatly. They will cause great difficulties for poll workers and voters in November 2006 and will likely suppress voter participation in the election. The differential impact on population subgroups, with particularly grave import for elderly and urban minority voters, will lead to unfairness in the ability to exercise the right to vote. The backup provisional ballot rules will also generate huge problems.

3.39 Finding: A significant portion of the voter education budget, just under \$15,000, was devoted to bus advertisements preceding the May 2nd election. The Human Resources department has indicated that more funds will be designated towards the bus campaign for the upcoming November election, completely replacing the use of billboards. The CCBOE believes that the mobility of buses allow them to be seen by a larger segment of the voting population.

Bus messages stated the date of the election and the phone number to contact the CCBOE, but contained little educational information. [RTA advertisement proposal; Interviews with Community Outreach and HR]

3.40 Recommendation: While the bus campaign was successful, billboards should also be used. Billboards are more likely to be seen repeatedly on a regular basis, as opposed to bus messages that are most often spotted sporadically. Because they are seen more frequently, billboards can convey more information than a bus message. The CCBOE should consult the Ohio Department of Transportation for traffic estimations, and locate

billboards in key locations, such as electronic billboards, which would allow for the largest numbers of voters to view the advertisements.

3.41 Finding: The CCBOE currently airs public service announcements (PSAs) on public television and public radio which seem distinctly geared toward an older population. The CCBOE would reach a much greater number of voters if the PSAs appealed to an audience more representative of Cuyahoga County's population. Specifically, PSAs should be produced that will appeal to younger and more ethnically diverse voters. The current public service announcements feature only an elderly woman who explains the procedure of voting in a relatively uninspired manner.

3.42 Recommendation: PSAs should be produced that specifically target different audiences, for instance, younger voters. A wider range of PSAs would attract broader radio play and attention by a wider voter demographic of radio listeners. The PSAs should be easy to follow and interesting enough to grab any viewer or listener's attention. PSAs should also feature a more diverse cast considering the diversity of the population toward which they are aimed.

3.43 Finding: The CCBOE staff associated with voter education feel greatly limited and restricted by budget concerns and believe that they could accomplish much more if they had more money. They expressed difficulty in finding sponsors to support community outreach projects. Pizza Hut had sponsored pizza parties awarded to school students who turned in the most voter awareness signatures, but other sponsors were hard to locate. [Interview with Community Outreach]

3.44 Recommendation: The budget for the voter education program is critical. Greater amounts of funding need to be dedicated to voter education and community outreach. While poll worker training is also important, the need to inform the public should not be ignored. Funds should be designated not only to continue the voter education programs, but also to expand the issues on which it focuses. The current mailer program for voter education should continue, and should at least be sent out for major elections if not all elections. Funding for these mailers should be included in the budget. Funding should also be included for more forms of advertising. In addition, businesses should be encouraged to help in the campaign to educate the voting population of Cuyahoga County. This again relates to informing the general public of the importance of the electoral process and encouraging civic service and participation.

3.45 Finding: Poll workers worry about the lack of voter education, especially that geared to seniors and the elderly. Anecdotal reports from one Presiding Judge and from other observers mentioned that the turn-out rate for senior citizens in the May 2nd election was very low compared to primaries in years past.

3.46 Recommendation: Part of the voter education effort needs to be geared to these elderly voters. A consultant should be retained to improve educational efficacy with this demographic group and with others. Part of the education to be conveyed to the people is that they will not receive a print out of their ballot and why they will not. More

demonstrations at senior centers, at churches and synagogues, and at other locations where seniors gather is crucial. Better voter education will reduce polling place lines and help to limit the problems at the polling locations.

Chapter IV: Poll Workers and Polling Place Support System (including Voting Locations)

Background

An under-recognized aspect of the election system infrastructure, poll workers determine who will be permitted to vote and what kind of ballot will be provided to a voter on Election Day. Thousands of dedicated and knowledgeable individuals have been serving as poll workers in Cuyahoga County. Because election laws and procedures have become far more complex, voters' ability to cast valid Election Day ballots depends greatly upon effective poll worker recruitment and training.

It is the CCBOE's responsibility to prepare the poll workers for their increasingly difficult duties and to support them on Election Day by providing a supplies and technical support system. For at least the past two years, voters, local election watch organizations, the media, and the poll workers themselves have flagged problems with the CCBOE's preparation of poll workers and with its support system for the polling places. The CCBOE's lukewarm remedial efforts, plus the tremendous challenges of retraining for e-voting, caused the cracks in the poll worker training and support system to become gaping holes on May 2nd.

Cuyahoga's poll workers (whose names, as later will be defined, include "Booth Officials," "Judges," "Election Day Technicians," and "Inspectors") themselves have been some of the most vehement critics about the quality of the CCBOE's preparation for the e-voting transition. Our research revealed that large numbers of poll workers earnestly desire to have the thorough training that will permit them to serve the voters with the utmost knowledge and efficiency. Their desire and continued willingness to be retrained in a high quality training system is crucial. But more citizens must volunteer or be recruited as poll workers to rebuild polling place competency. And the CCBOE must reorganize some core functions and obtain specialized services from qualified experts in order to provide the training and support systems required at the polls.

For ease in following this portion of the Report, clarification of a few terms might be helpful. A "polling place" or "voting location" designates a room in which separate tables are positioned to process voters who reside in designated "precincts." A precinct is simply a geographical division of the county into smaller units for purposes of voting. Boundary lines for local and state offices (for instance, for a City Council seat # 3) normally are drawn so that precincts are kept whole — that is, all voters in a precinct have exactly the same races on the ballot, and exactly the same candidates.¹²

¹² Unfortunately, a few "split precincts" exist in Cuyahoga County owing to school district lines not being concentric with municipal boundaries. These present special problems for voters and for the poll workers.

In one polling location, voters may discover that several precincts share the same room but by Ohio law, voters must locate their correct precinct in which to vote. As a practical matter, this translates into voters of different precincts needing to find the correct table. A school gym for instance, may be the assigned voting location for 5 precincts, each of which has a separate “regular” ballot. These will differ from one another causing a different ballot to be created for each of the precincts largely because of “ballot rotation” rules—which mean that no one candidate can always occupy the top spot in the race.¹³ Plus, depending on the type of election, a range of other types of special ballots may be required, and each must be used according to the legal prerequisites and administrative methods delineated. Some special ballots include provisional ballots and the curbside disabled voters’ ballot, plus the range of ballots that apply only in a partisan primary — Democratic, Republican, Issues Only, and 17-year-old ballots (discussed below). Some of these are electronic ballots and some are paper (optical scan) ballots. Taking the hypothetical school gym that houses five precincts, in the May 2nd election it was likely that this one voting location handled a total of *at least 30 different ballot “styles”* on this primary Election Day.

Poll workers must direct a voter to the correct precinct table so that the voter’s registration can be confirmed on the precinct listing of names and so that the voter can be given the correct precinct ballot. If the voter’s name is not listed, HAVA requires in federal elections that the voter must be offered a provisional ballot. Under Ohio law, a provisional ballot voter must not only be registered but must vote at his or her own precinct or the vote will be administratively rejected. Thus, if a voter does not locate the correct precinct table and still completes a provisional ballot, that ballot will not be counted. Poll workers must be carefully trained in the steps to be taken so if the provisional ballot voter casts the ballot in his or her correct precinct, that provisional ballot will be counted.

Poll workers play critical roles on Election Day in matters other than with provisional ballots and sending voters to the correct precinct table. They decide if a prospective voter’s signature is sufficiently like that found on the registration record to permit the person to vote. Poll workers also set up the polling place, the precinct table, the voting equipment, and the flags and signs so voters can find their way into the right location and efficiently cast their ballots. With the DRE system, the poll workers “encode” or authorize the “voter access card” that tells the voting machine to let someone cast a ballot and what kind of ballot. Where groups of “loiterers” can illegally seek, for instance, to persuade a voter standing in line to vote that it is “not a good idea,” poll workers serve as the first line of protection for voters from intimidation tactics. And after the polls close, the poll workers have the duty to pack up the voting records and protect them from harm until they pass custody to the transportation group that will deliver the votes to the BOE for tabulation. Beginning this fall in Ohio, poll workers will also be charged to check voters’ satisfaction of the new ID rules as a precondition for their voting.

¹³ Ohio mandates some complicated ballot rotation rules for candidates.

Thus, the CCBOE's poll worker staffing and training decisions are crucial determinants of voters' rights to vote and to have their votes correctly tabulated. Additionally, the network that supports and supplies the voting locations can cause the polling locations to fail the voters if the ballots or other materials have not arrived or need to be re-supplied. Significant revisions must occur in every aspect of poll worker recruitment, training and staffing positions, and in the polling place support network, in order to deliver a quality election performance on every Election Day.

Polling Place Personnel

Positions created and duties

CCBOE's staffing approaches for the polling places

4.1 Finding: Ohio statutory law mandates precinct staffing of four "Judges" no more than two of whom can be of the same political party. (See ORC §3501.22; ORC §3501.23). Additional polling place personnel positions may be created by a county BOE in its discretion. The CCBOE has changed its additional polling place support titles and the duties of these positions depending on the year and type of election. For November 2004, the CCBOE created the "Inspector" position, who served as a general trouble-shooter and greeter for voters at the polls. For the transition to e-voting, the CCBOE eliminated the Inspector position and substituted the Election Day Technician ("EDT"). From roughly 2004 forward, some precincts have also received a High School Assistant who is a trained, normally 17-year old who can assist the other poll workers. (See ORC § 3503.07). The position of "Rover" has also been filled when the CCBOE faces a complex election; these are individuals who can be sent as trouble shooters to the polling locations, and who can deliver supplies from the regional zones. [Interviews with Booth Officials Department; with Board Members; with Director and Deputy Director]

4.2 Finding: In addition to the assigned Judges and polling place personnel, the CCBOE has created additional reserves for staffing the polling places. For the May 2nd 2006 election, these included: (1) at the regional "zone" stations around the county, some trained EDTs ready to be assigned to replace or assist those already at the polling locations; (2) by city, a list of trained, substitute poll workers who were standing by waiting for a phone call alert on Election Day or the Monday night before, in case they were needed; and (3) a reserve pool of workers stationed at the Fraternal Order of Police building in Cleveland from roughly 5:30 am-11:00 am, ready to be dispatched if they were needed. [Interviews with Booth Officials Department Managers and former managers; with Board Members; testimony from substitute workers at the Public Hearings]

Problems and recommendations for major reform

4.3 Finding: Numerous problems existed in personnel staffing prior to the May 2006 election. Because of the exceptional demands of the e-voting transition, unresolved prior problems were greatly exacerbated on May 2nd. The issues included: poorly trained

polling personnel; insufficient staffing for certain duties; lack of crucial supplies; polling place personnel who had a poor work ethic being returned repeatedly to poll worker positions; error-filled or ambiguous Manuals for poll workers; lack of BOE interest in broader recruitment or hiring of others who wanted to be poll workers; no evaluations of polling place staff; no effective assessments of errors occurring at the polls for rethinking polling place training; plus many others. (The Training and Manuals issues will be addressed below.) [“Pink Sheet” Incident reports, Election Day Technician incident reports; ESI poll worker survey; press reports after May 2nd election; Republican Inspector report summary from 2004 and Democratic challenger reports from 2004]

4.4 Finding: Poll workers’ morale is low. Many factors contribute to their low morale. A wide perception exists that the CCBOE is not concerned with redressing the problems at the polling locations but is quick to blame poll workers for any problems that occur. In addition to disregarding poll worker feedback on issues that need to be redressed, factors generating low morale include:

- Inadequate and inconsistent training on new technologies and processes;
- Absence of performance evaluations, which implicitly communicates to poll workers that the CCBOE does not care about the quality of their performance;
- Lack of attention to and appropriate action regarding poll workers who have difficulty understanding training or performing their duties;
- Absence of year-round communications initiatives to stay in touch with poll workers and deliver small-scale, inexpensive year-round training enhancements;
- Inattention to the needs of polling place workers for consistent, well-managed supply logistics on Election Day;
- Poor or nonexistent support for inquiries and emergencies on Election Day, including an inability to reach the CCBOE because of busy phone lines or excessively long phone queues;
- Outdated, inconsistent and confusing paperwork poll workers are required to complete;
- Sloppiness in payroll accounting, and delays in payment of poll worker wages;
- Low pay and extremely long hours.

[“Pink Sheet” Incident reports, Election Day Technician incident reports; ESI poll worker survey; press reports after May 2nd election; Republican Inspector report summary from 2004 and Democratic challenger reports from 2004]

4.5 Recommendation: A comprehensive reform of CCBOE poll worker positions, training, support systems, and staffing policies must be undertaken, as will be discussed below.

Additionally, the CCBOE should study the Best Practices and guidebooks that the U.S. Election Assistance Commission has funded on poll worker recruitment, training, and retention. These materials are presently in draft form, while they are being tested and vetted more fully before being issued nationally. Because the CCBOE must move quickly

to institute a quality poll worker program in all respects, the CCBOE should consult and incorporate the wealth of wise, practical recommendations from these draft studies. The Panel perceives no benefit in rehearsing these nationally generated proposed Best Practices here but will from time to time refer explicitly to them. The entire set of recommendations should be consulted—both the College poll worker study, undertaken by Cleveland State University’s Center for Election Integrity, and the more general poll worker study, conducted by the Poll Worker Institute.

4.6 Finding: The number of names the CCBOE uses for poll workers confuses the public and the poll workers, and retards the ability of the CCBOE to define and clarify roles. As noted below, some names are also inconsistent with the statutes, which also fails to remind the CCBOE and the public that Ohio statutory law governs this area.

4.7 Recommendation: The range of names the CCBOE uses for poll workers should be reduced. The Ohio statutes refer to precinct “Judges” and the “Presiding Judge.” The term “Booth Official” should be eliminated entirely, including from the name of the department in charge of the polling personnel. The generic “poll worker” encompasses all who work at the polling place under the auspices of the CCBOE. The “Judges” are the statutorily mandated precinct personnel who have particular legally imposed duties. The “additional personnel” are discretionary with the BOE; we recommend that the titles chosen have some permanence. Also, any new position should not replicate a title previously used that is now assigned a different set of duties. The legal standards should be consulted and obeyed when enunciating tasks at the polls. See ORC §3501.22.

4.8 Finding: Several hundred poll workers (Precinct Judges and EDTs) did not appear to work at the polls on May 2nd. Many of these absences were documented at the required precinct poll worker meetings on Monday evening and called in by attending poll workers. Other absences were the subject of early morning calls to the CCBOE. [Interview with Booth Officials Department Managers and staff]

4.9 Finding: No reliable data exist on exactly how many poll workers attempted to withdraw from being assigned to work on May 2nd. Data and personal testimony demonstrate that many did call and withdraw, or attempt to mention as they left the training session that they would not work on May 2nd. But names were not necessarily removed from the precinct assignment list, even when CCBOE Booth Officials staff received the call themselves. Additionally, the practice of the Booth Officials Department has been to assign to a precinct anyone who attended poll worker training *without* the trainee having to indicate in some declarative fashion that she/he desired to work in a particular election. The same practice was followed for the May 2nd Election Day. Although the department manager stressed to our investigators and repeatedly internal to the CCBOE that he knew the CCBOE would experience higher rates of dropping out after training, the department did not institute procedures to accurately identify those who were dropping out and those who intended to work. Thus, the department was able to lull itself into a false sense of security about the numbers of poll workers intending to work on May 2. [Interviews with Booth Officials Manager; with Booth Officials Department

staff; with former Booth Officials Managers and staff; with Administrative Assistants; Public Hearing testimony]

4.10 Finding: All poll workers, including Judges and EDTs, were required to complete CCBOE-sponsored training in the new e-voting procedures. After the first two weeks of Booth Officials training, Director Vu requested that the Registration Assistant Manager conduct a telephone survey (using staff in her area) of those poll workers who had been retrained thus far to determine their confidence level in the new training and e-voting procedures. The Booth Officials Department received the results of this survey on an almost daily basis. The survey results showed that fully 80% of the poll workers felt that their training was deficient. [Interviews with department managers]

4.11 Recommendation: This survey should have been another early warning signal that the drop-out or no-show rate would be high, and that additional poll worker recruitment and training needed to occur. Unfortunately, as discussed in the Management and Personnel chapter below, the Director and Deputy declined to assign the Booth Officials Department manager additional personnel to handle the logistics and supplies for the poll worker training sessions, and so Mr. Thomas spent his time as a just-in-time delivery person instead of trouble-shooting and managing the polling place recruitment and staffing situation. The CCBOE Executive Managers should have authorized sufficient staffing so that the department manager could perform his managerial tasks for May 2nd polling place staffing.

4.12 Finding: Several different CCBOE offices were involved in recruiting the various types of poll workers for May 2nd. The Administrative Assistants of the Board Members were placed in charge of recruiting the Election Day Technicians (EDTs) and scheduling them for training. The Booth Officials Department continued with its normal function of recruiting and assigning the Precinct Judges. The Community Outreach Department assisted in the recruitment of Precinct Judges and took a larger role in High School Assistants recruitment. At least some Outreach staff refused to help recruit for the EDTs. Some Booth Officials Department staff and managers perceived the assignment of EDT recruitment as an attack on their competency. The Administrative Assistants acknowledged feeling embattled; they did not request the EDT recruitment and scheduling role, and yet were criticized and felt undermined for seeking to perform the task assigned by the Director. [Interviews with Booth Officials employees and Administrative Assistants, reports of several EDTs affected]

4.13 Finding: The new role of the EDT created various staffing and recruiting competition and conflicts. The Booth Officials Manager warned that any Booth Official choosing to become an EDT would be removed from the Booth Official pool and could not return to the polls as a Booth Official in the future. This stance was an attempt to discourage the depletion of Booth Official ranks in favor of more highly-paid EDT jobs, but was also a competitive move between BOE staff that kept experienced Judges from taking on greater responsibilities as EDTs. [Interviews with Booth Officials employees and Administrative Assistants, Public Hearings; reports of several EDTs]

4.14 Recommendation: A recommendation in the Management and Personnel Chapter advises that the Human Resources department should be the primary mechanism for developing the recruitment strategies and credentials, including background checks, for all temporary and permanent hiring. The Administrative Assistants should continue to recruit but should be able to forward all the applicants' names to the HR Department for further development of their credentials. Splitting the recruitment efforts among multiple departments and having them compete against one another for filling positions not only wastes scarce energies and undermines agency teamwork, but also does not allow the CCBOE to put its best foot forward in using sound and creative recruitment strategies. None of the CCBOE staff currently involved in poll worker recruitment has special relevant expertise. Only one staffer has an educational background relevant to these tasks, and as it is not the primary area of her CCBOE work, she does not spend time trying to further develop these skills.

4.15 Finding: The concept and role of the EDT evolved over time before the May election and differed between the various instructors and Booth Department officials. Different representations to different poll workers about who was in charge of each type of function led to role confusion and conflicts at the polling place. According to some EDTs participating in the focus groups the Panel conducted after the election, they were instructed simply to support the Judges and told that the Judges would know how to do their jobs. Many of the Judges, however, were told that they would "*not have to touch*" the voting machines and all they had to do was sign people in. This inconsistency in directions angered many of the Judges, because they felt as though they were being deceived by the CCBOE. These issues, which occasionally were grave, could have been avoided with more careful planning and conceptualization of the various positions, and more consistent and explicit training and materials. [Focus Groups; Public Hearings; EDT reports]

4.16 Recommendation: The polling place staffing should be restructured to achieve several objectives: (1) comply with the Ohio statutes, (2) provide sufficient guidance and assistance for voters and the poll workers, and (3) be able to deal with any emergency situations. All personnel for a given polling location should undertake their initial training as a group, at the same time. The EDT position should be eliminated, with the skills and expertise of that position replaced by appropriate training of Precinct Judges as described below. All Election Day positions that are designed to provide support to the Precinct Judges should be filled with those who have had experience (and good reviews) as Judges. In addition to the Judges, and forming a hierarchy of knowledge and experience, positions should be created for Polling Location Supervisors and Rovers. Zone Call Centers should be created and dispersed throughout the County, so that any missing supplies and information can be provided without long telephone queues, busy signals and long delivery wait times. An outline follows.

Precinct Judges: As mandated by statute, there should be four Judges in each precinct with one designated to be Presiding Judge on the basis of membership in the dominant political party. See ORC §3501.22. Generally, the statute has been

interpreted and applied at the CCBOE as requiring the Judges to be two Democrats and two Republicans (or 1 Republican and 1 Independent/Not Affiliated).

The Panel recommends that the CCBOE adopt a practice that has well served other Ohio BOEs: require all four Judges to attend the same one day “core training.” This training should be designed to cover the basics of all polling place tasks. (This joint training also allows trainers to identify any personality conflicts so that poll workers can be reassigned before Election Day.) After the core training, each Judge should choose a specialty, either “paper/administrative rules” or “voting machines/tech” so that two Judges in each precinct become expert in each side of the tasks. The Judges must choose specialties so that one Judge from each political party is an expert on each side (meaning that the Republicans cannot choose to be technical specialists and the Democrats the administrative specialists.) Following the core training, the Judges should be required to attend in-depth training in their specialty area (preferably on a different day).

This approach will mean that the EDT position can be eliminated, and role confusion and conflicts can be greatly reduced. The Ohio statutes appear to require that any polling place personnel other than the Judges must be paired by party (instead of having one R or one D, one of each must be assigned. Clarification should be sought from the SOS Election Division.) On the basis of the statutory criteria, the interactions of the Judges at the training session, and the evaluations of the trainers and Booth Officials staff present at the training session, the CCBOE selects the Presiding Judges. Further, given that the responsibility for memory cards rests with the Lead Precinct, the CCBOE can select the Presiding Judge who, on the basis of experience and leadership seems best suited for being the lead Precinct Judge and for handling the Memory Card bag(s).

Location Supervisors: These positions should, over time, be treated as a promotion from the Precinct Judge position. Those assigned should be experienced polling place personnel, including past political party “challengers” and “observers.” Recruitment for this position must occur months in advance. Unless the SOS clarifies otherwise, two supervisors must be assigned per location, one Democrat and one Republican or nonaffiliated, with one being named the Lead Supervisor and the other the Assistant Supervisor. Each of these positions can be treated as a split shift with two people trading off after a brief overlap mid-day, working as a pair. (In a paired split shift, each person must agree to continue to work if the other in the pair fails to appear, and the hours should still overlap slightly so that there can be time for the two people to transition.) The Supervisors will handle specific duties as well as serve as troubleshooters.

Those assigned to the Supervisor position must train with the Judges in their polling locations, and then receive the additional job-specific training that the Training Coordinator or consultant prescribes. The specific duties of a Supervisor should include: greet the voters and help direct them to their correct precinct; assist with voting machine set up and be in charge of the machine placement that will best

assure voter privacy and safety from tripping on cords; manage the Monday night meeting of poll workers at each polling place; determine appropriate precinct table placement; check for correct signage/flags; place orders for missing supplies; identify and eliminate voter intimidation tactics; ensure that the payroll cards are completed and returned; check for correct security seals on supply bags after closing; assist in take down of the machines; serve as a consultant on Certificate #1 and any other matters that the Judges request; evaluate the poll workers; and assure that incidents are properly reported. The Supervisors may assist the Judges and substitute for them during breaks. The Supervisors may also reassign Judges if certain precincts have more difficulties than others, or if personality conflicts occur. The Polling Place Supervisor must have a personal cell phone to facilitate communication with the CCBOE.

Rovers: Rovers should be the most highly trained and competent personnel fielded on Election Day. Each Rover should be assigned eight to ten polling locations (or perhaps a Ward) and should rotate the whole day between his or her assigned locations. The Rovers must have prior experience and excellent reviews working in the polls as a Judge, EDT, Inspector, Rover, or Challenger. Each Rover must have personal transportation. Rovers can also work half-days, splitting the jobs, so as to permit a broader number of persons to be involved.

Training and Evaluation Essentials: As mentioned above, all polling place personnel should be assigned to the same training session for team building and evaluations for lead roles. At the end of training, all personnel should have to take and pass a two-part test. The written portion should be a test (for instance, graded by an optical scanner) having 20 questions (but with numerous versions — reordering the same questions so it is both fair but cheating can be largely defeated). In addition, there must be a dexterity and basic literacy evaluation, where each Judge and other official can be evaluated for basic ability to read, to hear and to write effectively since each of these skills is required of a Judge, Supervisor, and other personnel. These evaluations need to be designed to preserve maximum dignity and yet also identify those who lack the skills for the tasks to be discharged on Election Day. If an applicant does not pass the test, the CCBOE should provide another opportunity to complete the training and retake the test (with no additional pay for the second training). If a Judge fails the test two times, the person should not be allowed to work at the polling place on Election Day but might be offered a position in the CCBOE offices in another temporary position such as opening absentee ballots.

The Lead Precinct and all Presiding Judges will be selected at the training. The Lead Precinct will be in charge of the Red Supply Bag containing the memory cards and special supplies for use by the entire polling location.

Substitutes for Judges: The substitute Judges must attend the entire training program, including the specialty training. Substitutes should be recorded by specialty so that they can be assigned according to the specialty that is needed by a particular poll worker absence. The CCBOE must recruit at least as many substitute Judges as

in previous years. The substitute Judges must be available for call between 5:00 AM and 11:00 AM on Election Day, and their phone numbers must be confirmed before Election Day.

Reserve Poll Workers, Formerly Called “Pool Workers”: We recommend the elimination of the “pool worker” term as it is confusing. Ideally, the former “pool” will be eliminated and students — both high school and college — will be recruited to be the reserve workers. Those who desire to be placed in reserve must still be interviewed, selected, and trained. While the CCBOE has generally filled the former “pool” with individuals currently undergoing rehabilitation for crimes and drug abuse, the evidence before the Panel suggests these sources of poll worker reserves should end. Complaints and concerns have been raised repeatedly by fellow poll workers and by voters.

Zone Support: The CCBOE should create 8 -12 zones stations across Cuyahoga County, each complete with supplies, support, telephone lines and staffing. Each voting location should be given one phone number to call to reach their Zone Support, with one back-up (nearby) Zone Support number provided. Each Zone Support station should have knowledgeable, trained staffers who can (1) answer questions regarding voting location issues that are not successfully resolved by the Supervisors such as voter IDs and provisional ballots voter access, security and electrical outlet problems; (2) dispatch needed supplies using their own zone delivery personnel; (3) contact substitute poll workers and assign them to a an understaffed precinct; (4) dispatch replacement DRE units and technical personnel. The zone workers can be hired to work split shifts, rotating for alertness and to reduce stress.

Each of the zone workers who answers calls must receive specialized training in the various categories of possible questions/problems. Each call should have an intake procedure that allows for its speedy redirection to the appropriately trained personnel. The zone stations should be designed only to respond to poll worker calls and to requests for action that are made from the voter hotline personnel who believe a matter (such as late opening) requires the zone’s attention. Delivery personnel must be trained in the parking options for all voting locations and in all duties of their position. These delivery personnel should also be reassigned over the election cycle, if possible, to the same geographic area so they can build relationships and knowledge of an area.

The Board of Elections has persistently underestimated the volume of phone calls on major election days or has not sufficiently resolved the problem with temporary phones. This must be resolved before November 2006. Well-trained voting location supervisors would relieve some of the zone back-up, but not all of it.

The new technology requires more time for polling location set up and break down.

4.17 Finding: Insufficient staffing was provided for setting up the DREs on Election Day morning. Additionally, closing down the machines and other tasks when workers are tired requires a better staffing approach.

4.18 Recommendation: The proposed new structure of half the Judges fully trained in the technology aspects, plus the location supervisors assisting in setting up machines, supplemented by an expanded High School Assistants program (discussed below), should solve the set-up and closing down problems.

Recruitment efforts

4.19 Finding: Recruiting adequate numbers of poll workers has been difficult for the Booth Officials Department staff (both temporary and permanent) charged with this task. Poll worker recruitment efforts have occurred predominantly on an ad hoc basis. This past spring, the severe shortfall below the required number of workers became apparent by the third week of April, with little time left for recruiting and training additional poll workers before the May 2nd election. The CCBOE staff currently make few efforts to recruit a competent and diverse demographic of people to run the polls. Recruiting is often done at the last minute. Ward leaders play a large role in the recruitment and assignment of poll workers, as they have been accorded the authority by the Board to nominate and essentially place in precincts those whom they select to work. [Interviews with Booth Official Department employees]

4.20 Finding: A troubling, false presumption runs through the CCBOE staff who recruit for polling place positions: there is little public interest in these poll worker “jobs,” that any “warm body” is all one can expect. Staff consider ward leaders an important source for filing these unwanted jobs. No significant creative effort has been expended on recruitment strategies, and qualified experts have not been retained to assist in developing better recruitment strategies. [Interviews with CCBOE staff and managers]

4.21 Recommendation: CCBOE staff involved in Election Day staffing recruitment should cease thinking of poll worker positions primarily as jobs for those who are unemployed. These roles are closer to being volunteer positions with a relatively low expense stipend or monetary contribution offered for giving up one’s time and for helping to defray costs of transportation and food. Although this extra money is unquestionably very helpful to individuals who are economically stressed, the CCBOE needs to be more broadminded about who is available and potentially interested in filling these Election Day positions. The CCBOE staff need to think of this position as a public trust that many Ohioans are interested in fulfilling, especially given that our State has been under fire for its election practices. It is laudable for the CCBOE to offer these positions to those who have an economic need for the compensation, but only if the persons are capable of fulfilling the duties assigned to them. The first and non-negotiable requirement for filling poll worker positions of any kind must be whether the person can handle the duties imposed by law and assist valid voters to cast ballots correctly.

4.22 Finding: The Administrative Assistants came the closest to having a project plan for recruitment of EDTs, but their efforts were undercut by a short period for recruitment and by competition with the Booth Officials Department. They sought a meeting with the Center for Election Integrity early on, and included the Manager of the Booth Officials Department, so that coherent, creative strategies could be explored. [Interviews with Administrative Assistants; with Booth Officials Department Manager]

4.23 Recommendation: The CCBOE staff charged with poll worker recruitment and placement need to study the range of recruitment strategies that can be found in the EAC College Poll Worker Guidebook (draft) and the EAC general Poll Worker Guidebook (draft). Some strategies to be adopted include partnering: with colleges and universities; with businesses; with civic and charitable organizations; and with other government entities. Some potential partners could “adopt” a polling location and commit to staffing it (or assisting in staffing it) every election. Other entities may be willing to use their considerable energies to promote employees and others to volunteer for these positions, as President Michael Schwartz of Cleveland State University did just prior to the May election. At the time the CCBOE Board made its request for the University’s assistance, it had just learned that perhaps as many as 200 poll worker positions were unfilled because of late drop outs. President Schwartz sent out a broadcast email to the entire university community within 24 hours of the request, and University employees and students filled all remaining training slots with a 100% show rate. This response underscores that the public interest exists; it just needs to be tapped in the right way. And the CCBOE staff needs to become more creative and enthusiastic about building new recruiting relationships and strategies. The public is interested in these positions.

4.24 Recommendation: Another site for new recruitment may be found at the polling places, where information should be provided on how to become a poll worker. One Panel member recruited four persons on May 2nd at one voting location. With more polling location positions and a ladder for promotion, Judges will be more open to recruiting others as precinct workers. They can be encouraged to replace themselves so they might move up the ladder into a supervisory role or to work less frequently.

4.25 Recommendation: When undertaking new recruitment efforts to expand the pool of workers, it is important to show CCBOE interest in all citizens of any age, of any background, and of all ethnicities. The CCBOE needs to ensure that while seeking to expand the base of interest in these positions, the highly knowledgeable and very capable current Judges (who might be retirees) do not mistake the new recruitment efforts as a rejection of them and their contributions. Clear CCBOE appreciation of them, and the request that they remain part of the poll worker system, is essential. Unless care is taken to develop a clear and appreciative message, it would be easy for some of these highly experienced poll workers to assume that they are being pushed out.

4.26 Recommendation: Much more active recruiting initiatives must be developed, involving greater numbers of creative and skilled staff. Some other Ohio counties nurture corporate partnerships for poll worker recruiting, where the firms view Election Day service as not unlike jury duty and compensate workers at their regular pay rate. Such

firms should receive special recognition in newspaper announcements for this community service. Franklin County's aggressive corporate recruiting effort attracted 350 poll workers from two major businesses alone, and that County's director expressed a goal of 50% non-traditional (corporate and student) poll worker staffing by the fall of 2006. Franklin County has been drawing on the strategies in the draft EAC guidebooks, as should the CCBOE.

Other Ohio counties undertake poll worker recruiting at events such as fairs and festivals. Many counties are targeting government agencies, schools and churches, and utilize radio, newspaper and television advertising as well as poll worker newsletters. Franklin County is moving toward a year round recruitment effort. A number of Lorain County staff members recruit poll workers in addition to their other assigned duties.

The CCBOE should identify and strive to meet a concrete recruitment goal from nontraditional sources for the November 2006 election.

4.27 Recommendation: Offering additional paid training opportunities can serve as recruiting incentives. Franklin County has a Certified Precinct Judge program which offers a certificate when a worker completes eight (8) additional hours of paid training and a successful evaluation. Its director reported that the extra money earned for the training is a strong incentive. Creative methods can be used to provide additional compensation to poll workers while complying with the statutes. [Interview with Director Damschroeder]

4.28 Recommendation: Ward leaders should be encouraged to continue to suggest poll workers, but candidates for poll worker jobs will have to satisfy the requirements for training and evaluation. After training, they must be able to qualify at certain basic levels, perform adequately on post-training evaluations, and accept assignments to precincts where their skills are most needed. *Please see the Quality Assurance and Continuous Improvement proposal for more details, Appendix F.*

College poll worker recruiting

4.29 Finding: Colleges are an underutilized recruiting resource. The high school poll worker program (discussed below) is growing slowly, but a similar program at local universities and colleges (including community colleges) has yet to be developed.

4.30 Recommendation: The Election Assistance Commission (EAC) has funded *A Guidebook for Recruiting College Poll Workers*, which is currently being test run in pilot programs across the nation. The guidebook offers guidance on issues of recruitment methods, incentives, training, and retention. Many colleges exist within the County where recruiting can occur. At the very least, colleges should be informed of the need for poll workers and asked to contact their student population through the volunteer services office and various other applicable departments. The Center for Election Integrity's draft Guidebook for the EAC suggests that these efforts should start early, at least ten months before an election. The Guidebook also recommends working with campuses that have

large numbers of in-state residents so that the students can fulfill the poll worker residency requirements. Director Vu has agreed that the CCBOE will serve as a Pilot Program for the College Poll Worker Program this fall. This participation entails implementation and close evaluation of the draft Guidebook containing emerging national Best Practices. [Interviews with Abigail Horn and Director Vu]

4.31 Recommendation: When parity between political parties must be achieved for certain poll worker duties, the CCBOE has had difficulty filling Republican positions due to County voters being more heavily Democratic. Here again the colleges might prove to be a useful resource. Many colleges offer student-run Democratic and Republican clubs. These sources might be particularly valuable for locating Republican poll worker personnel.

High School poll worker recruiting

4.32 Recommendation: State law permits 17 year olds to register to vote in primaries where the general election will occur after they turn 18. See ORC §3503.011. State law also permits these registered 17 year olds to act as precinct officials if positions otherwise remain unfilled. See ORC §3501.22(C & D). This program has received applause from both poll workers and voters and should be expanded. The program not only supplies precinct workers but also functions as an educational program for young voters who are introduced to the electoral process through their poll worker experiences. These younger individuals working at the polls were described by many poll workers as being especially helpful with the new machines due to their generally strong technological aptitude and comfort level.

4.33 Recommendation: Recruitment of high school poll workers needs to be both ongoing and aggressive. Retention can be a problem because students often move out of the area to go to college. In other counties, a local organization has partnered with the county's BOE and then has handled recruitment and placement of high school workers completely. We recommend that the CCBOE seek to partner with nonprofit organizations that already have a presence in the high schools locally. An organization should be sought that is willing to take over recruitment and placement, with a commitment to expand the program into all County high schools. Franklin County recently partnered with a local chapter of the organization Kids Voting for a recruiting effort in high schools called "Youth at the Booth," which garnered 500 student poll workers. Younger populations also can be targeted through different media, such as radio stations and public service announcements on television programs serving their age group.

4.34 Recommendation: A genuine overture should be made to every high school, both public and private, for participation as poll workers so that students from every school and area can participate in this civic opportunity. Each school could be assigned particular polling locations for its students to support. As is the case now, the students would be trained at the schools. The duties of the students would replicate the duties of the Judges who have specialized in the technical precinct work. The students should be paired up so that each can work a half-day. In addition to the students who are assigned to

work half-days, the program should be structured to include groups of students who (1) pledge to be on-call, (2) are assigned to come in and assist specifically with closing up the polling place, or (3) have fluent language skills (Spanish and Chinese, for instance) and can be placed as translators at the locations where these languages are spoken by the voters in those precincts.

4.35 Recommendation: The High School Assistant program should be a part of the Booth Officials Department. The Community Outreach Department should facilitate recruitment for all types of temporary positions in the CCBOE but have no ongoing or primary responsibility for the High School Assistant program.

Emphasis in recruiting of civic participation aspect of poll work

4.36 Finding: The limits on pay for precinct workers which are mandated by Ohio law can make recruitment of qualified individuals difficult. Recruitment efforts currently lack much emphasis on the importance of civic participation; they simply state a job description (in a relatively uninteresting manner) and the pay rate. The manager of the Booth Officials Department indicated that those who participate in the process because of civic concern are more capable and reliable poll workers. [Interview with Dane Thomas]

4.37 Recommendation: Recruitment messaging should be altered to emphasize public service aspects of the work in addition to the opportunity to earn some money. CSU used this form of recruitment which produced a 100% turnout rate for training compared to the low turnout rate for others. This example demonstrates that when the CCBOE urges people to “help improve Ohio elections,” instead of just approaching recruitment as a temporary job offer for low pay, the type of commitment and the range of interested persons can be quite different. [See President Schwartz’s broadcast email to the CSU community a few days before the election]

Background checks of candidates for poll worker jobs

4.38 Finding: The CCBOE has hired workers from temporary agencies to perform poll work and other jobs at the CCBOE offices. The temporary agencies impose a fee per person to conduct background checks for any legal violations that would render a temporary employee unqualified to work for the CCBOE on Election Day. HR Administrator Platten noted that the CCBOE does not conduct background checks on any temporary workers. For the May 2nd election, temporary agency invoices logged no charges for background checks. [Staffing agency invoices; interviews with Administrator Platten and Lisa Durkin]

4.39 Recommendation: Background checks must be performed for poll workers. If adequate staff resources do not exist to do so in-house, the CCBOE should contract with an outside agency to conduct background checks on all prospective poll workers in order to comply with the legal qualification that no person convicted of a felony may act as a precinct election worker. ORC 3501.27(A). Alternatively, the law enforcement agencies should be contacted for guidance on procedures to follow (see Management and

Personnel). This will require recruiting early enough for the checks to be completed prior to applicants being offered positions and before the commencement of training.

Reducing poll worker absenteeism on Election Day

4.40 Finding: Preceding the election, the Booth Officials Department predicted that an unusually large number of poll workers, over 300, would not report to work on Election Day. In anticipation of this problem, the Booth Officials Department attempted to recruit extra workers, and additional training was offered to help deter drop-outs, but the steps taken were not as successful as had been hoped. The foreign or complex nature of new technologies and procedures, coupled with perceived inadequacy of training, scared away many poll workers who did not report for duty on the day of the election. [Incident Report analysis; EDT reports; Telephone surveys]

4.41 Recommendation: Improved recruiting, additional higher-quality training, and objective evaluations following training should prepare workers more fully and screen out unqualified candidates or workers unable to make the transition to new voting technology. All of these measures will instill in poll workers a higher degree of confidence and decrease absenteeism. Although Lorain, Franklin, and Montgomery Counties recently instituted new voting processes, they reported no significant increases in no-shows among poll workers on Election Day. Among the actions undertaken in these other counties that have not been done either at all or to a comparable degree in Cuyahoga County are:

- Careful evaluation of poll workers during and following training;
- Remedial training or discharge of candidates who are not performing at adequate levels;
- Additional training and practice opportunities, including certification programs;
- Year-round communication through newsletters.

Polling place work issues

Length of Work Shift

Finding: Some poll workers desire to have shorter work days than 15 hours. [Public Hearings]

4.42 Recommendation: The BOE should experiment with having paired workers who apply together. The EAC Poll Worker Guidebooks offer some concrete suggestions for operationalizing this approach.

Pink Sheet/Incident/Security

4.43 Finding: Incident Reports, or “Pink Sheets,” are the primary mechanism by which the CCBOE has tracked problems at the polling places. All precincts are supposed to document the range of problems experienced on Election Day, and each poll worker and

Presiding Judge is required to sign the resulting report. The Pink Sheets should be an invaluable documented record of supply problems, voter registration problems, and operational difficulties.

Numerous problems, however, regularly arise with using this procedure to collect critical information. First, the CCBOE could only manage to produce 1,260 of the 1,434 total precinct Incident Reports. Many of these pink sheets were incomplete or blank. A number of these reports had not been signed by all poll workers, and several were completely unsigned. It is possible that precincts plagued with poll worker and EDT absences, mechanical failure, poor training, and inadequate supplies for the election were too overwhelmed to fully document the deficiencies. Even precincts with serious reported problems, such as failures to open the polls on time and long lines at the polls, neglected to include opening times or average wait times of voters. Often poll workers neglected to include whether an absent poll worker or EDT arrived or was replaced, whether a broken DRE or printer was repaired, or what steps were taken with any failure or success to remedy a problem. [Incident Reports analysis]

4.44 Recommendation: The Pink Sheet should be replaced with quality control mechanisms that are generated by the Quality Control Manager (*see Appendix F*). Poll workers must be given sufficient motivation to document problems at their polling places. That motivation can come in the form of positive or negative reinforcement for their performance on this measure.

Evaluations and remedial actions

4.45 Finding: At present, no effective evaluation system has been established for poll workers. Moreover, the Booth Officials Department does not have a mechanism or database for retaining negative or positive information on the performance of Judges, and it rarely takes any remedial action to replace sub-par Judges. Mr. Thomas, the Booth Officials Department Manager, explained that ward leaders have tried to block remedial actions that he has taken. Mr. Thomas recognizes that the poll workers have varying commitments and capabilities for handling the poll worker job well. He also believes that strengthening the Department's hand in removing underperforming poll workers would be a benefit for the voters, the CCBOE, and the poll workers. [Interviews with Dane Thomas]

4.46 Finding: Other counties' BOEs not only keep records on performance, but they also analyze the types of errors committed by poll workers at each precinct. Then they bring in these poll workers to the BOE offices for discussion, correction, and retraining. Cuyahoga's BOE does not employ any of these corrective strategies.

4.47 Recommendation: An effective evaluation process for poll workers must be developed. Until a Quality Control Manager can be hired to develop this process more fully, the CCBOE must create a simple list of criteria for evaluating Judges. The evaluation must be able to be completed quickly and in a manner ensuring that Judges are evaluated on the basis of consistent criteria. An area on the form should be provided for

discursive comments. The voting location Supervisors should evaluate each Judge. The Supervisor should be charged with handling the payroll cards and also placing this evaluation form in the same sealed envelope. At a later point, voters and other Judges should also be encouraged to evaluate all polling place personnel, with all the information logged for reference in deciding whether to rehire or promote a Judge or other official.

4.48 Recommendation: Managerial consideration needs to be devoted to creating concrete performance structures and targets for CCBOE staff involved with poll worker recruitment, placement, and evaluation. If the staff is to start stressing capable performance from the poll workers they recruit, they must also be rewarded for their successes. Quality control checks must also be established so that staff will move assiduously toward generating high quality polling place performance. The new Quality Control Manager should be involved here, but until that person is hired, the department managers should work with staff to create a team approach to institute higher standards for poll worker performance.

Election Day Support Structure for Polling Places

CCBOE's approaches

4.49 Finding: In no interview with any CCBOE manager were Panel investigators able to obtain a complete list of the entire Election Day support apparatus. The lack of consistent knowledge demonstrates that the planning for the support system has not been a subject for careful thought and planning. Speaking with the executive managers in July, they were still not aware of the range and depth of nonperformance of the support structures on May 2nd. The Director and Deputy are aware of the CCBOE's telephone queues and busy signals as a persistent problem on major elections, but they have not moved decisively to solve the problem — despite its existence on every major Election Day for several years. [Interviews with Managers, Executives]

Ineffective CCBOE responses to requests from polling locations

4.50 Finding: Various departments spread throughout the CCBOE handle different call centers and support functions. Departments involved include the Booth Officials, Election Support, and CVS (especially Registration workers). No coherent structure and plan integrates these activities and ensures that essential information is transferred to the personnel who can act effectively on the information to solve polling place problems. Thus, on May 2nd, rooms of EDTs sat without assignment although scores of polling places were missing personnel; the calls for these replacement staff did not arrive at the proper place for dispatch. Call centers politely received reports of missing but needed supplies, then stacked up the reports but did not act on them. CCBOE personnel handling calls were not effectively trained. In one center, staff were given a black binder but had not been alerted to their task—whether to record calls or to attempt to solve the problems. [Interviews with Managers]

4.51 Finding: Some Garden Valley poll workers, whose location did not open until nearly 1:00pm, claimed that they had called in information about their problems early on Election Day but no CCBOE staff responded. Although no record was found of such a call, one Panel member who acted as an election EDT noticed that the calling records also did not report a single one of her five calls spanning Monday night and Tuesday morning when she reported missing supplies, a printer problem, and missing poll workers (only five of eight present). It is conceivable but not capable of proof that the Garden Valley poll workers' made efforts to obtain assistance but that they fell on deaf ears or an incompetent support system. [Interviews with poll workers; call center Logs]

4.52 Finding: Poll worker calls to the CCBOE were not answered by knowledgeable officials on May 2nd. The calls from Election Day Technicians and Booth Officials were not directed to the proper authorities who could remedy the complaints. Staff assigned to the various CCBOE command or call centers have stated that they were not trained before being assigned the task of taking calls that came in. The roll over phone system was the only measure of directing the calls, which simply meant that if someone did not pick up the phone it would go to the next phone line in alphabetical order. Staff also indicated that on May 2nd when they answered the phones, they lacked the knowledge necessary for dealing effectively with the problems presented. They also commented that managerial backup was similarly befuddled by questions and problems that arose, especially concerning DRE problems. Touchscreens freezing, printer paper jamming, voter access cards sticking, DRE legs breaking, and other unfamiliar and unexpected events caused the staff to feel ineffective in their assigned roles. [Interviews with Booth Officials]

4.53 Recommendation: The people answering phones at the command center need to be properly trained to respond to questions and problems called in by the poll workers. The Board of Elections may have to hire and train additional staff that will allow them to have enough people on the phones on Election Day who are competent enough to help poll workers with their questions. Logs should also be kept recording these problems, so that recurring questions and complaints can be addressed prior to the next election, and problems with e-voting equipment can be documented for vendor relief.

4.54 Recommendation: To check on voters' correct precincts, poll workers should be provided a separate phone number connecting to CCBOE staff where the CCBOE staff can access the registration database and provide accurate information.

4.55 Finding: Zone stations, the central supply stations for polling places, were understaffed and insufficient in number. EDTs and Booth Officials experienced great difficulty in reaching the zone phone numbers, and the zone stations were incapable of promptly responding to the complaints that reached them. [Hearings, Incident Reports]

4.56 Recommendation: All zone locations should be open the night before the election, staffed and ready to deliver missing supplies and equipment that night. In a major county-wide election, the Panel recommends that 8-12 zone stations should be well dispersed around the county. This would help with the amount phone calls any one zone receives.

More zone stations would also assist a quicker disbursement of supplies and support, so that voting machines would be down for a shorter period of time and Judges and EDTs would need to spend less time on the phone.

4.57 Finding: The zone stations had “Rovers” who were supposed to be on call to correct any problems at the polls, such as lack of supplies or technical problems. The staffing of the Rovers at the zone stations occurred primarily from the pool of EDTs. However, many of the EDTs had not been informed until Election Day that they would be placed in the zone stations. Even worse, many of the EDTs who were assigned to be Rovers did not have cars and could therefore not perform their assigned duties. [Interviews with the Administrative Assistants]

4.58 Recommendation: The Rovers should be selected and informed of their placement prior to the day of the election. Under the Panel’s recommended restructuring of poll worker positions, the Rover would occupy the top run of the poll worker ladder. These positions should be filled by the most experienced and effective trouble-shooters the CCBOE has developed. Zone stations should be well staffed, and personnel stationed at the zones should be well trained and prepared to handle any issues polling locations may face. The zone stations should be placed in central locations within a geographical area, so that Rovers may move quickly between the zone station to a polling location. Lorain and Montgomery Counties use the Rovers to assist with machine set-up, which might help alleviate problems with late set-up times and problems with the new machines. The Panel also recommends that Rovers assist in set-up.

4.59 Recommendation: More regional pick up and drop off locations for supply bags (that contained the memory cards) should be designated for Election night. Many poll workers reported that they had to drive much too far to drop off the bags Election night.

Confusion about DESI Support: DESI did not provide on-site staff with expert knowledge of voting machines.

4.60 Finding: Many poll workers had been told that DESI would supply a trained expert on site at each polling location to assist with voting machines. However, many poll workers reported that no one from DESI was present for most of the day, if at all. Additionally, DESI troubleshooters had often received less training and knew even less than the CCBOE-trained EDTs. [Interviews with DESI representatives and poll workers; Hearings]

4.61 Recommendation: If the CCBOE has DESI workers assist at polling locations, DESI employees or contractors need to be far more knowledgeable about the DRE machines. No contracts should be executed with DESI for polling location support without explicit terms concerning the training and experience the DESI workers must have.

Training Issues

Poll worker training was inconsistent, deficient in content and methods, and failed to develop the skills, understandings and confidence needed

Planning the training for instructors and the poll workers

As discussed in the Management and Personnel chapter, the CCBOE generated a significant drain on managerial staff time when it decided to draft itself two complete training manuals for poll worker training, one for Booth Officials and one for Judges. This diminished attention to training and recruitment efforts.

4.62 Finding: The CCBOE Implementation Team, which included top management, had in its possession copies of a DESI Poll Worker Training Guide on 10/12/2005. DESI mailed copies to all members of the Implementation Team and sent hard copies to the Booth Officials Department and Kathy Dreamer at about the same that date. DESI contractor Joe Nista had agreed to supply a detailed class outline of the content of planned training courses to Deputy Director Dillingham by 10/19/2005. [Notes from Implementation Team meetings]

4.63 Finding: Selected CCBOE staff attended Lorain County poll worker training and L & A testing, brought back a copy of Lorain County's training manual, and reported favorably about the training to the Implementation Team at its 11/2/2005 meeting. Staff discussion occurred on observations, problems and suggestions relating to the training. [Notes from Implementation Team meetings]

4.64 Finding: The Director and Deputy Director stated during the Panel's investigation that they had never received and never viewed the DESI poll worker training manual that DESI and the Ohio SOS prepared for use in Ohio. Yet this was the same manual that Lorain County used, and was in the hands of the CCBOE Implementation Team in October 2005. [Interviews with Director and Deputy Director; interviews with CCBOE staff]

4.65 Finding: The DESI Master Contract with the Ohio Secretary of State included a provision requiring DESI to provide a training manual for its DREs, and to train poll workers on its equipment. The CCBOE elected not to utilize these services which DESI was required to supply at no cost to the County.

The Master Contract between DESI and the Ohio Secretary of State provides in pertinent part:

The Vendor must provide:

1. Extensive training programs for all poll workers and Board of Elections staff on all phases of the Voting System(s). Such training shall be sufficient to the point that State and Local Election personnel shall be able

to operate the system without continuous support by the Vendor. The training shall address.... [topics omitted]

2. A detailed training program for each county, which shall include:
[an extensive list of topics and services, including:]
 - Training materials for use by election personnel . . .
3. The Vendor shall provide pre-election training of poll workers and Board of Elections staff prior to and through the first County-wide election.

[Diebold-SOS Master Contract, page C-4 and C-5]

4.66 Finding: A DESI instructor conducted the technical portion of Lorain County poll worker training. Administrative Assistants Linda Steimle and Betty Jones briefly reported to the Implementation Team meeting that they liked the DESI training, and recommended that Cuyahoga County use a training manual like that in Lorain County. Managers Dane Thomas and Betty Edwards reported that the Lorain County training was very good and presented the information well, and that if Cuyahoga could do the same thing, they were confident about this training. The Team meeting notes show Thomas advised that Cuyahoga could not afford to change anything once the training started, as it would have to train in excess of 6,000 people. Other comments included that the Cuyahoga training manual must be easy enough for a young adult to pick up and conduct an election simply by looking at the information with knowledge of what needs to be accomplished on Election Day. [Notes from 10/12/2005 and 11/2/2005 Implementation Team meetings.]

4.77 Finding: Although no written document clarifies exactly who made the final decision to reject the DESI standard DRE training manual that was used in Lorain and in many other Ohio counties, Booth Officials Manager Dane Thomas stated that he recommended that Cuyahoga write its own simpler manual and that he author it. The Director clarified in an interview that CCBOE Executive Management approved this approach partly because of the philosophical position that the Director and Deputy Director had taken about establishing CCBOE independence from Diebold (including from Diebold's trademark). Their objective was to demonstrate to voters that the CCBOE had maintained appropriate distance from the voting machine vendor. The Director specifically stated that he did not want two separate manuals at the polling locations, with one for administrative/legal information and one for technological; he desired one combined manual for all purposes. [Interviews with the Director and Manager Thomas]

4.78 Recommendation: Establishing independence from a voting machine vendor is a two-edged sword, however. The CCBOE was not yet ready to fly the nest and professionally execute all functions requisite to the transition, including the writing of error-free and easy to follow poll worker manuals covering all legal, procedural, and technological functions. This is another example of the poor judgment exercised by Executive Management. CCBOE managers attempted far too much in the scant six

months available to move from punch cards to DREs and optical scanners. They should have used the Diebold training manual and focused on creating a firm foundation of knowledge and skills with the new technologies before expanding into more secondary tasks. The managers spread themselves too thinly and were consequently unable to perform any task well. For the August and November elections, the Panel recommends that Diebold's training manual be used, supplemented with checklists and "Quick start" guides.

4.79 Finding: The CCBOE worked with a DESI representative to create a schedule for all the "Train the Trainer" classes, where instructors would be trained in how to train EDTs and Booth Officials. Prior to the date training began, the DESI instructor realized that she was unavailable for the March 20th EDT trainer class. She assured Booth Officials Manager Dane Thomas that someone from DESI would be present to lead the training. This did not occur, however; the CCBOE had to cancel the initial EDT classes because no one from DESI arrived to conduct the training. DESI's Project Manager Hiner stated that DESI offered and was prepared to supply Cuyahoga a five-day, high quality technical training, but that the CCBOE rejected this offer. This offer and the performances it supposedly promised is not well supported by the facts concerning DESI's disruptive absence from the EDT Train the Trainers classes. [Email between DESI Trainer Linda Merbach and Dane Thomas; Interview with Booth Officials Manager Dane Thomas on 6/27/2006; Interview with ITC representative on 6/22/2006; Jessica Hiner testimony at 6/29/2006 Hearing]

4.80 Recommendation: Given that DESI did not provide the professional EDT trainer as promised, that EDT trainers as well as the EDTs themselves did not receive the professional curriculum taught by DESI's expert trainers, and that DESI representatives have publicly asserted less than the complete truth about their role and nonperformance in CCBOE poll worker training, DESI should make amends for its training omissions and accusatory misstatements.

4.81 Recommendation: The Cuyahoga County Prosecutor (or his designee) should thoroughly assess what portions of the Master Contract DESI failed to perform. With the assistance and support of the Ohio SOS, he should consider whether to demand legal and practical remedies from DESI, including specific performance of contractual provisions such as training services, and supplemental performances to compensate Cuyahoga County voters for the nonperformance of basic duties, and for its less than honest presentation of the facts concerning its recommendations and role in the training programs. More concretely, the Prosecutor should consider the following remedies: DESI to supply free of charge (and without SOS compensation under the contract extension that was recently negotiated): (1) a staff of highly competent trainers to assist in curriculum development for the Technical side of training (both core and advanced); (2) instructors for all Train the Trainers sessions; (3) lead trainers for the technical portions of all the Cuyahoga County poll workers training (who will be supported by assistant trainers taught in the Train the Trainers sessions); (4) competent, well-trained field representatives to assist Cuyahoga County polling locations with the November election. In light of past events, it is hardly too much to suggest that DESI should commit to

making Cuyahoga County a premier example of the quality of its training and support team's quality by ensuring that the November 2006 election is first-rate in all technical aspects.

Manuals and training procurement — details

4.82 Finding: The CCBOE received notification of federal funding for improved poll worker education at least six months before seeking to write and then procure a poll worker training package of manuals and services. The Ohio SOS received *over \$1 million* in federal HAVA funds to support Election Official training and Voter Education. In late May or June 2005, the CCBOE received notice of its portion of these funds; in round figures, the amount totaled \$250,000. The CCBOE could have begun initially planning its poll worker training programs at that point. The CCBOE received a letter shortly thereafter from the CSU Center for Election Integrity. This letter, sent to 20 northeastern Ohio counties, suggested various ways to use the HAVA grant monies to upgrade poll worker training and voter education. The CCBOE, however, did not start its planning for improving poll worker training, even on the administrative guidance that had been problematic in past training efforts. Nor did it engage in planning for how to use these grant monies most effectively. [Interviews with Lisa Durkin and Administrator Platten; SOS notification letter; Center for Election Integrity letter]

4.83 Finding: The DESI training manual arrived at the CCBOE by October 12, 2005, thus supplying an essential resource to begin development of Cuyahoga County Booth Official training for electronic voting. The decision to contract for external services to develop training materials and curricula is not well-documented. The DESI schedule list for the CCBOE May Election Calendar stated that the Request For Proposals (RFP) for supplying training and manuals was to issue 1/2/2006. This RFP, which is a formal request for outside services or products, issued several weeks after the calendar date, when barely 90 days remained before the May 2nd primary election. Only 4-6 weeks were available for the preparation and review of bids and the supply of all requested services.

4.84 Finding: The RFP was sent by email to potential contractors. It was posted for the public on February 1. The pre-bid meeting, to explain the needs of the CCBOE for the training program and manuals creation, followed on February 2nd. The RFP declared February 6th at 11:00 am the close for all bids. This schedule meant that the CCBOE provided potential contractors approximately two business days between the time of the explanatory meeting and the date and time the proposals were due (for writing two training manuals, and detailing the curriculum for two types of Train the Trainer classes, plus general poll worker training classes). Poll worker training has been referred to by CCBOE Board Members as the "Achilles heel" of the May election. [Notes from 10/12/2005 and 11/2/2005 Implementation Team meetings; transcript from the 4/3/2006 CCBOE board meeting, pg. 39 line 5-22 and pg. 42 line 23; interview with Director Vu 6/16/2006; CCBOE timeline, pg.2; Interviews with ITC and other bidders; RFP acquired from ITC; Cleveland Plain Dealer 2/1/2006]

4.85 Finding: The CCBOE received four bids ranging from \$12,950 to \$71,237. The standard of evaluation to be applied was “lowest and best” bid. [Interview with Brendan Gorman, Procurement Manager] The CCBOE procurement team selected the lowest bid. Their documents show that they rated all the proposals/bids. Without exception, the report stated the team’s ranked rating order from lowest to highest bid in strictly monetary terms. This CCBOE rating report implies that the team’s primary and perhaps even exclusive criterion for rating proposals was the bid amount, although the report attempts to identify deficiencies in each proposal.

4.86 Finding: Because the recommended bid fell below the procurement threshold of \$15,000, the executive management awarded the contract to the Institute of Technology Consulting (ITC). Contracts below the \$15,000 threshold are exempt from having to be presented to the CCBOE Board, and thus it did not formally act on this contract. Manager Gorman stated that ITC had been in charge of training the CCBOE staff in its transition to a new telephone system, so the CCBOE team had confidence in the firm’s training skills. [Interviews with Gorman and ITC personnel]

4.87 Recommendation: While saving the taxpayers’ money is a laudable objective, State law mandates that procurement decisions are to take into account more than simply the lowest bid. Ohio’s law reflects the common sense consumer understanding that “you get what you pay for.” Economies must be sought in public expenditures but by deploying wise, strategic judgment. The quality of services and materials must be taken into account in procurement and careful judgments made, especially on crucial items. The CCBOE executive management should have perceived effective training of poll workers as an investment not only in the May 2nd election but also as the opportunity for upgrading and rethinking poll worker training in a manner that corrected past, well publicized problems. By not beginning the planning, budgeting and procurement of these services in June 2005, the CCBOE lost crucial time and the value of the substantial one-time-only federal funding. By leaving only 4-6 weeks for the manuals and curriculum development, no more than mediocrity could have been obtained from even the best contractor for these services. All procurements for elections must be researched and services/materials obtained on a schedule that permits high quality performance and quality control assurance (with penalties for nonperformance) by the procurement office.

4.88 Recommendation: In contrast to the CCBOE’s approach to poll worker training, planning, and procurement, the Director started planning for additional DRE voting machine procurement in May 2005. By these actions, Director Vu’s relative valuation of voting technology versus the poll worker/human services factor comes into sharp relief. Vu demonstrated aggressive willingness to seek millions more for expenditure on voting technology but then disregarded the essential role of poll workers in allowing those voting machines to be used efficiently (or at all) at the polls. This set of values and priorities meant that the CCBOE has neglected to developed the human skills side of the Election Day equation. Successful Election Days depend on both the human and the technology factors; the CCBOE neglects either at its (and the voters’) peril.

4.89 Finding: No member of the CCBOE management team or its staff supplied the Panel with a copy of the initial draft of the Booth Officials Manual developed by ITC. The contractor was able to locate and supply to use the ITC initial draft. Managers and executive managers correctly reported that the draft Manual contained grammatical, spelling, and punctuation errors, as well as administrative procedure and technical errors. The RFP had specified that the Manuals were to be supplied in camera-ready condition. The Manual drafts also highlighted that the CCBOE had not developed certain essential policies and procedures to be used on Election Day. The situation so concerned Director Vu that he “took over” the revisions of the Manuals. [Interviews with Managers and with Platten; ITC draft]

4.90 Finding: Pam Heschel of ITC stated that she spent three (3) times the amount of time she had predicted in her bid in attempting to perfect the two manuals. [Notes from 10/12/2005 and 11/2/2005 Implementation Team meetings; transcript from the 4/3/2006 CCBOE board meeting, pg. 39 line 5-22 and pg. 42 line 23; interview with Director Vu 6/16/2006; CCBOE timeline, pg.2; Interviews with ITC and other bidders; RFP acquired from ITC; Cleveland Plain Dealer 2/1/2006]

4.91 Finding: At a great cost to management time during the critical pre-election period in March 2006 when managerial attention was needed elsewhere. Director Vu informed a large proportion of the departmental managers (and their assistant managers) that their presence was required for developing the Manuals’ revisions and rewrites. The Director estimated in an interview that the CCBOE spent approximately \$10,000 in staff time perfecting the manuals. The Panel estimates, however, that the revisions cost the CCBOE far greater costs than \$10,000 because of the amount of time upper level management spent working on the manuals. Booth Officials Department Manager Dane Thomas stated that he personally spent at least sixty (60) hours rewriting the Manuals, and CCBOE documents show that top management held numerous long meetings to change the manual. At least 9 managers (and executive managers) attended the two 12 hour meetings, plus the additional 6 hour meeting in which the Manuals were jointly rewritten, and Executive managers were involved in further revision and editing throughout March and part of April. [Interviews with Dir and Dep; Depart managers]

4.92 Finding: The Booth Official Manual was not available for use in the *Train the Trainers* sessions or were available in photocopied format. Despite numerous revisions extending past the commencement of training sessions for Booth Official training, the primary Manual went through at least six revisions. Early training classes were conducted using versions which later were superseded because errors were discovered and some initial polling place procedures were reconsidered. [Interviews with Pam Heschel; Dane Thomas; EDT Trainers]

4.93 Finding: Despite these repeated revisions, the final version of the Booth Officials Manual contained both grammatical and functional errors. It conflicted both with the DESI reference guide and with the training DVD sent by the CCBOE to Judges and EDTs a week or two before the election. Further, the Manual contained internal contradictions. A number of Booth Officials described the training manual as inaccurate

and extremely difficult to understand. The final manual provided for use on Election Day contained substantial errors which affected Booth Official's ability to set up and configure voting machines for voting on Election Day, creating delays and frustrating both voters and poll workers. [Interview with Director Vu 6/16/2006; Email sent from Director Vu to all managers and assistant managers on 3/8/2006; Transcripts from CCBOE Monday meeting on 4/3/2006, pg. 39 line 5-22; Interview with Dane Thomas 6/27/2006; Staff interviews; Final Booth Official Manual pg. 67 and pg. 55; Telephone Surveys; Incident Reports; Public Hearings]

4.94 Recommendation: Given the need to develop a training program for over 6,000 non-technical people on new technology and technical procedures, and the early availability of initial information resources, the process of training development should have begun far in advance of 90 days before the election. Training development should be overseen, and its delivery coordinated, by the recommended new CCBOE Training Coordinator. Outsourcing these services as a transitional matter may be wise so long as careful consideration of appropriate expertise and other qualitative factors is a major part of the ultimate procurement decision. Impaneling a small group of external advisors to evaluate the bids with an independent, critical, professional eye might be a wise move. An early timetable is essential to the outcome.

4.95 Recommendation: Where development will be outsourced, the CCBOE should establish a longer minimum timeframe for submission of bids of this magnitude. Future RFPs should be detailed in a manner that communicates far better what skills and expertise will be needed to complete the job. Contractors should be selected on the basis of CCBOE requirements, the quality of the personnel and expertise offered by the prospective bidder, and proven ability to fulfill those needs — rather than with undue weight given to bid amount.

4.96 Recommendation: For polling place use, we recommend use of the DESI manual, supplemented with checklists for the steps to be taken at the polls on each Election Day for each type of ballot or major function. A checklist is simply a short reminder list of points that should be broadly and deeply developed in an excellent poll worker training course. The checklist for use at the polling place cannot substitute for the training or for quality training materials. Checklists are valuable only if the poll worker has developed significant knowledge about what each checklisted step indicates.

The checklists should be reviewed and revised in light of the specifics of each election, because the technical steps may change depending on the type of election. Administrative checklists need to be reviewed and updated in light of changes in Directives and federal and state election law. These steps cannot be skipped, and the materials produced must be reviewed by a qualified election attorney.

Ideally all these materials (training materials keyed to Cuyahoga procedures plus checklists) will be prepared so far in advance of Election Day that they can be posted on the CCBOE website for comment. The process that we contemplate would also allow, as it must, the materials to be checked and rechecked for accuracy. Beginning their

production well in advance also permits the CCBOE to vet its drafts with poll workers, then correct them, and then vet them again. Election advocacy representatives can also provide useful commentary and guidance, which should be solicited.

Issuing a contract for developing training materials, the checklists, and managing this review process would free up CCBOE managers to focus on other activities. Development should be started at the earliest possible date to allow adequate time for proofreading, content revision and testing with poll workers and advocacy groups. All materials must be developed and completed well in advance of training schedules (except for late-issued legal changes) so that poll worker training can be consistent and instructors are well-prepared.

Train the Trainers: Ambiguous and confusing directions from DESI

4.97 Finding: In a meeting between Manager Dane Thomas, Linda Merbach of DESI, and Pam Heschel of ITC, DESI required that CCBOE “halve” the training of trainers program which the department manager had scheduled for 50 individuals for five days. DESI did not clarify orally or in writing that its lead trainer meant that the number of trainers should be reduced to 25 and that all trainers should be present for five full days. The Manager shortened the training period to two and a half days for 25 each session in reliance on Merbach’s oral directions. [Interviews with Thomas and Heschel; Merbach email]

4.98 Finding: At the Public Hearing (6/29/2006), DESI’s Hiner stated that Diebold’s consistent position has been that all poll worker trainers must be present for a full 5 days of training in order to be properly equipped as trainers. Hiner stressed that DESI flagged this problem for the CCBOE but Managers refused to accede to her advice. Although the Panel requested written documentation for Hiner’s claim that she warned the CCBOE that it was making a grave mistake, Diebold did not produce any written support. We have only an electronic message from DESI’s Merbach restating the training schedule that had been agreed (among her, Dane Thomas, and Heschel) of two and a half days for two sets of trainers to receive instruction. This DESI message fails to intimate in any manner DESI concern over the halving of training sessions for the trainers. [Merbach letter; 6/29/2006 Hearing Transcript]

4.99 Recommendation: DESI should have advised the CCBOE immediately that grave problems would result from such abbreviated training of trainers.

4.100 Finding: On the basis of Merbach’s ambiguous directions, the individuals to be trained to conduct Booth Official classes were divided into two groups. The CCBOE scheduled them for two and a half days of training that Merbach would conduct. The electricity went out during the first day of training, so the CCBOE had to extend training on the second day. When an extra day of training was offered as a refresher for all trainers, only about 20 of the total of 43 attended. Most of the trainers the CCBOE hired were retired teachers, many of whom had never served as poll workers themselves.

[Schedule list from Booth Officials Department Manager Dane Thomas 6/27/2006; DESI testimony, 6/29/2006 hearing; Interviews with trainers and Dane Thomas]

4.101 Recommendation: It is unknown how vigorously DESI resisted this training plan in its oral comments by Merbach, or whether it offered an additional five days for Merbach to be available for the other half of the class. The Panel believes that by his actions and his documentation, the Booth Officials Manager had evidenced concern for establishing the highest quality training program, and was relying on DESI to advise him on what the program should include. The ambiguity in the DESI oral directive to halve the train the trainers program should have been clarified by Merbach instead of DESI taking advantage of the reliance and good faith of the Booth Officials Department Manager and his relative inexperience in the area of e-voting transition.

If DESI was serious and consistent in its training recommendations for the Train the Trainer, it should have scheduled two five-day training classes. Each training class would have had 25 participants and received the full five days of training. This would have ensured that one group of trainers was prepared to begin training the initial groups of Booth Officials and that another group of trainers would be ready one week later. If, as it appears, DESI did not allocate an appropriate number of days for its poll worker trainers to be in Cuyahoga County (given its immense size with over 6000 poll workers), the failure should lie with DESI and not the CCBOE. Responsibility for DESI tightly scheduling its trainers and not taking into proper account Cuyahoga's size and obvious needs for more than one 25 person Trainer class should rest on DESI and not the CCBOE.

DESI should remedy its nonperformance/underperformance in March 2006 by providing, free of additional charge, two five-day training programs for trainers.

4.102 Finding: A separate Train the Trainers issue concerns the EDT trainers. While DESI promised to have trainers present for this training session, no DESI personnel arrived on the appointed day. The EDTs were sent home and requested to return the next day. On that subsequent day, again no DESI personnel arrived, and a CCBOE manager tried to provide the training.

4.103 Recommendation: A full-time agency-wide Training Coordinator position should be created. This position should be staffed by a professional with education and experience in instructional development for adult education, to coordinate training throughout the CCBOE including the training of Judges and other poll workers and temporary and permanent employees. The Training Coordinator should develop comprehensive training plans and outlines in accordance with established standards for training development. These plans should provide for the temporary teams of instructors the guidance they need to properly and consistently teach poll workers all that is needed for operating polling places on Election Day and upholding election laws. The manager of the Booth Officials Department concurs as to the value of professional training staff. *See the Management and Personnel section for other recommendations about this position.*

Curriculum and pedagogical considerations

4.104 Finding: Two distinct types of activities and requisite information fell within the Booth Officials/Judges roles for the May 2nd training sessions: (1) technology information for e-voting and (2) administrative rules for processing voters, different types of ballots, the provisional ballot paper work, disabled voters, and certificate #1 accounting, and other rules. Approximately 90% of the training time for Booth officials classes was devoted to technology issues, even though the CCBOE conception was to turn over a good deal of the tech issues to the EDTs. The administrative rules were largely ignored. Worse, some instructors stated a falsity, that “nothing has changed” with regard to anything but the voting machines, and so there was no need to handle any task differently from other elections. [EDT and Booth Officials testimony; Coalition submission on training problems]

4.105 Finding: Concerns about training were not limited to training on machines. 53% of election workers also expressed concern that training on election law and administrative procedures was inadequate [ESI poll worker survey, Q16F]. Only two hours of the Train the Trainers training was devoted to teaching administrative process, and these two hours were the last hours prior to the completion of the training. [Schedule list from Booth Officials Manager Dane Thomas 6/27/2006; DESI testimony, 6/29/2006 hearing; interviews with trainers; interview with Thomas]

4.106 Finding: Poll worker training classes were not well structured for conveying information clearly in a manner for high retention. Poll worker skills development and confidence did not increase. A variety of problems with the training can be identified:

- classes were too large
- individual practice time with DREs was insufficient
- classes did not adhere to professional standards for delivery of adult education. [Judgments based on applying IBSTPI standards to the information gathered from ESI poll worker survey, poll worker reports]
- provided contradictory information depending on trainers
- lacked sufficient procedural and administrative training (in such matters as provisional ballot rules)

[Focus Groups with poll workers; Greater Cleveland Voter Coalition paper]

4.107 Recommendation: Trainings should be planned so that for technology portions, each person has sufficient time and is required individually (and without partner help) to attempt to apply the lessons and processes being taught. Professional advice should be sought from those with the appropriate expertise so that the classes can be efficiently structured and sufficient one-on-one instruction can occur.

4.108 Finding: Even though DESI professional trainer Merbach was heavily involved, no standardized course plans and outlines for training sessions were created for the

Spring 2006 classes. Instructors of poll workers for the May 2006 Primary were required to develop their own courses from the training they received and from the error-filled and oft-revised training manuals. The result was inconsistent instruction, false information, disagreements between trainers during the training sessions, skipped material, varying emphasis of topics, and other problems. [Interviews with CCBOE staff; trainers' plus poll workers' testimony; Greater Cleveland Voter Coalition submissions]

4.109 Recommendation: Standard curricula and course materials must be created, and little discretion can be accorded to trainers as to coverage. The approach used in March-April 2006 left far too much discretion to individual instructors, resulting in inconsistent instruction, missed material, varying emphasis of topics, and poor use of time in some classes.

4.110 Recommendation: Checklists and quick start charts should be developed for use on Election Day. The training materials can and should be far more detailed and explanatory but should not be expected to substitute for the checklists

For example, for use on Election Day the Training Coordinator should consider creating three large illustrated posters with step-by-step instructions — one (1) for Monday evening DRE setup, one (1) for Tuesday morning DRE setup, and one (1) for Tuesday evening DRE reporting, shutdown and repacking. The posters should include large diagrams, color-coded illustrations and photos such as are commonly provided on posters accompanying computers and consumer electronics equipment. [Dane Thomas; Trainer interviews]

An Election Day set of checklists is needed to guide poll workers on how to check voter ID, process regular, provisional, curbside, and 17-year-old votes, assist visually-impaired voters and those requiring special physical accommodations, reconcile and complete end-of-day paperwork, manage the polling place, and perform certain other duties. The materials should also include a glossary. The reminder checklists must appropriately balance the need to be concise with the need to be user-friendly, accessible and understandable by a range of poll workers.

4.111 Recommendation: A guide to help with DRE trouble shooting is needed. One suggestion is to have a “cheat sheet” with a list of major problems and the way to solve them. According to one of the poll workers, a *Top 10 List* of DRE problems and solutions would be a great asset.

4.112 Recommendation: It should be obvious without having to say it: *all training material must be consistent in its directions*. Consistency must exist between the instructions given in the Manuals, training sessions, any DVDs/videos, and the DVD prompts and screens.

4.113 Recommendation: The CCBOE must do a better job in seeking to ensure that the policies and procedures it enunciates for poll workers and staff to follow accord with the governing law—both State and Federal. All procedures, checklists, and any policy

Manuals and training curricula must be checked to ensure that they operationalize the federal and State election law mandates. These should also be vetted by election advocacy organizations, and ultimately any differences of opinions should be resolved by the SOS or the County Prosecutor. Components should include, for example, whether political party party is required for certain activities; what the restrictions are in helping a disabled voter. Providing this information would help the poll workers make decisions based on what is fact and not what they think is fact.

4.114 Recommendation: The EAC's guidebooks on poll workers (mentioned above) provide extensive suggestions are offered for structuring and delivering effective poll worker training programs. These should be consulted for tested recommendations.

Instructors selected for training poll workers; Training for instructors

4.115 Finding: On top of his other managerial duties for recruiting and organizing the training and deployment of over 6000 poll workers for May 2nd, Manager Dane Thomas became the ghost writer for the poll worker training manuals. Thus the drain on his managerial time was substantial, and he was unable to turn to the project of securing trainers for the poll workers until relatively late. He secured commitments from some trainers who were well qualified and experienced, and from others who had proven inadequate in past poll worker training efforts. He also turned to a variety of retired teachers, many if not most of whom had never served as a poll worker. Thomas was unable to evaluate the teaching skills of this cadre of individuals before he secured their services, but he did remove some who later proved ineffective. [Interviews with Thomas; with Booth Department staff]

4.116 Finding: Trainers were paid differently according to whether they were training Booth Workers or EDTs, and whether one was the lead trainer or an assistant trainer for a given class.

- EDTs Lead: \$100 per 5-hour class
- EDT Assistant: \$70 per 5-hour class
- Booth Official Lead: \$80 per 3-hour class
- Booth Official Assistant: \$30 per 3-hour class

The CCBOE ultimately hired 37 trainers; each trainer could be assigned any one of the four above listed jobs. This practice caused a problem for Administrator Platten, because she had to pay the trainers different hourly rates depending on which group they were training. For example, one trainer could be a Booth Official Assistant in the morning and an EDT Leader in the afternoon. In that situation, the Administrative Department has had many problems inputting payroll correctly. The County system does not allow the computer to set different wage scales for an individual. Therefore, the Administrative Department had to override the system each time it had to input a different salary. This system may become extremely problematic in the case of an audit. [Interviews with Platten; with other CCBOE employees; CCBOE meeting Transcript 4/3/2006, pgs. 31-32]

4.117 Recommendation: The public Universities and community colleges of the State of Ohio should undertake the role of creating a training program for poll workers and poll worker instructors, as recommended to the Secretary of State by representatives of the Center for Election Integrity in June 2005. A core curriculum should be developed with SOS involvement. This could also be the umbrella under which greater coordination and consistency is obtained between Ohio counties in their administrative and legal procedures, and could promote the sharing of ideas and procedures regionally within the State. The approach would provide an efficient low cost mechanism for the SOS to operationalize changes in election laws rather than leave it up to each county to try to fathom complex legal changes and Directives/Advisories.

4.118 Recommendation: Until and unless the public higher educational system undertakes these training efforts, the CCBOE should establish a single hourly rate for lead trainers, and one for assistant trainers. It must assign and train instructors for one position or the other, depending on their qualifications and aptitude, as evaluated using objective means.

4.119 Recommendation: Persons hired or contracted to perform poll worker training should have suitable professional competency for training adults; some recent experience working at the polling places in some capacity; and knowledge of the general tasks or areas covered by the training. They should be competent in the specific material they will be responsible for teaching, including both technical and non-technical subjects, if the same trainers will teach both types of materials. We recommend, however, that a specialist in each side of the instruction be paired rather than attempt to have one person teach it all at a mediocre level.

4.120 Recommendation: The recommended CCBOE Training Coordinator should determine in conjunction with qualified experts what the content and coverage, and even the teaching methods, will be for each type of poll worker training (core and advanced). Complete standardized outlines, improved training materials, visual aids, slide shows, and prepared evaluation forms should be standard throughout all trainings. Little discretion can be permitted as to course coverage and materials. Individual trainers must follow the path set out, but should be encouraged to offer feedback for improvement of the course.

4.121 Recommendation: A member of the Board of the CCBOE labeled training the “linchpin” of the elections; therefore, it should not be rushed. The CCBOE should ensure that the trainers not only learn to operate the DREs, but that all involved understand the procedures and are fully trained independently of the DRE operation.

4.122 Recommendation: The International Board of Standards for Training, Performance and Instruction (IBSTPI) prescribes sets of competencies as standards for instructors and for instructional design. The competencies apply as guidelines for course planning, curriculum structure, selection and evaluation of instructors, selection and preparation of appropriate physical environments for learning, instructor presentation, instructor management of learning environments, application of visual and auditory aids

and media, evaluation mechanisms, etc. Plans and outlines for training of Booth Officials and EDTs, and methodologies for evaluation and discharge, should be developed according to IBSTPI and or other professional standards and the requirements of the CCBOE. *See IBSTPI standards, Appendix I.*

Location of classes in environments conducive to effective training

4.123 Finding: Training classes were held at various locations around the County, as well as at the CCBOE. In some cases actual classrooms were used, but in most cases chairs were set up in multi-purpose rooms, either in a circle or theater-style. Rarely were tables provided for note-taking, and some conditions were described as uncomfortable or crowded. [Staff interviews; poll worker and EDT reports]

4.124 Recommendation: A proper training environment is essential for effective learning. Distribution of training into the community close to poll workers' homes is a laudable goal, but should not be done to the exclusion of suitability of the facility. Thoughtful and appropriate attention should be given to planning of training locations, since that election schedule is known years in advance. Good training locations should be consistently provided for each class with appropriate setup to support the learning experience, including writing surfaces for each learner, comfortable chairs, good lighting, an absence of distractions, and good ventilation. It might be prudent to contract with educational institution(s) that can offer multiple sites with classrooms, and a secure room for storage of DREs and other materials used for training.

Use of visual and auditory aids

4.125 Finding: Trainers used easels or other visual aids in very small rooms that lacked blackboards. No computerized slide presentations were used to reinforce key concepts or to provide clear views of items being discussed in class. [Booth Official and EDT reports]

4.126 Recommendation: Each of the five next-largest counties in Ohio either already uses or plans to implement computer-based presentation support (PowerPoint) for poll worker classes. This should be done in Cuyahoga as well, with the presentation supervised or developed by the Training Coordinator. The benefits of slide presentations include: control for consistent curricular coverage; broad knowledge of the class outline; and key points that can be reinforced in bullet points. Consistent with good training delivery, instructors should not simply read their slides, but rather, use them as an outline and mechanism for illustrating key materials and concepts, and expand on each point contained in the presentation as is appropriate to deliver a full understanding of the topic. Microphones with small loudspeakers should be used in all classes, since many of the learners are older people with diminished hearing ability. Auditory enhancements should always be used, whether requested or not, since those with hearing problems often are not comfortable mentioning these issues.

Training of poll workers together in their polling place or precinct teams

4.127 Finding: No formal mechanism has been used in the CCBOE for training poll workers of a given location at the same session so they can develop a sense of serving as a team. Other counties report great success by using the team training approach.

4.128 Recommendation: Teamwork is key to the effective functioning of a polling place. Familiarity among team members, attention in training to the specific needs of a given polling place, and special attention to specific teams of individuals who may have had trouble in the past are all important. As recommended above under Poll Worker Staffing Structure, all poll workers assigned to a given voting location should be trained together, and special team building activities should be a part of training

Teams also should report for paid dry runs, or "Practice Makes Perfect" days, as they are called in another Ohio county, to go through all functions they will perform together one last time just before Election Day. This is especially important for poll worker teams with split precincts, and when new technology or significant new procedures have been introduced, such as the voter ID requirements that will take effect in November 2006. This practice is also essential for those precincts that have been trouble spots in past elections. The practice sessions would allow the CCBOE to make strategic personnel changes, if needed, or engage in retraining on key points before Election Day and its exigencies. The dry runs would communicate the CCBOE's new approach that "warm bodies" are not enough; *performance matters*. It would also promote higher quality outcomes on all tasks on Election Day.

Special training for new poll workers and problem precincts

4.129 Finding: In Cuyahoga County, individuals serving as poll workers for the first time received no special training but rather were placed in classes with experienced poll workers. The learning curve of a new poll worker varies considerably from one who needs to learn only what has changed since the last time of service, or to take a refresher course or determine if continuing service will be possible in light of advancing age. Portions of the training dealing with newly-introduced technical matters would be applicable to both groups. [Interviews and focus groups]

4.130 Recommendation: The Training Coordinator should consider specially designed training sessions for the newest poll workers.

4.131 Finding: The CCBOE held training sessions for all poll workers, but did not cover the specific procedures for working a "split precinct." Split precincts are those which cross boundaries of other jurisdictions such as school districts, with resultant distinctions between ballots required for voters who live in different sections of a single precinct. Poll workers must determine what the correct ballot is for voters on the basis of their address within the precinct. The Director told the Panel that special training was provided for split precincts, but the department manager stated that these workers receive on Election Day only a special sheet of written instructions. On May 2nd, poll workers at Woodbury

School experienced many problems with the split precinct, as has occurred many times previously. [Interviews with poll workers; Public Hearings; Incident Sheets; Interview with Director]

4.132 Finding: The Shaker Heights School District had placed on the May 2nd ballot a school levy. At Woodbury, one precinct included some voters entitled to cast votes on that question plus others who lived outside the school district. The Booth Officials Department elected to provide a separate encoder for each split of a precinct, rather than to program a single encoder to produce the required number of different ballots. In many instances, the Judges did not fully understand the process and gave voters a wrongly-encoded ballot. [Interviews with poll workers; Public Hearings; Incident Sheets]

4.133 Recommendation: Although separate encoders were intended to simplify the process for poll workers, split precincts and different encoders add greatly to the complexity of operating a polling place. For all poll workers at split precinct locations, such as at Woodbury School, the CCBOE must provide special training and Election Day support given their unusual duties. Poll worker assignments to split precincts must take into account the added complexity and the special alertness needed for these tasks, and reassign workers as needed before the next election.

4.134 Recommendation: To promote teamwork and voter recognition of their precinct, the CCBOE tries to maintain consistency in the precinct it assigns a poll worker. This practice provides a value and benefit to all. But reassignment should also occur according to the needs for good balance of skills within each precinct and polling place. In hands-on training with voting equipment, the same people should be working together who will be working together on Election Day. This complicates scheduling logistics and will not be possible to implement 100%, but since required training timelines are known far in advance, training should begin and be scheduled early enough to provide significant notice to poll workers of when their team will be trained. When first initiated, the CCBOE should also explain why it is pursuing joint training instead of offering a variety of training options.

Structure and length of classes

4.135 Finding: The CCBOE managers do not seem to have recognized that classes longer than two hours tend to be ineffective for retention. For Spring 2006, the agency allotted three hours for Booth Official classes, and five hours for EDT classes. This time was to be split between training on revised procedures and on newly-introduced technology, which reasonably should be expected to be foreign to many of the learners. Instructor allocation of class time between topics varied widely. Booth Officials training focused primarily on the setup of DREs and how to use the encoders. Trainers spent little time on administrative issues and the procedures for filling out paperwork, because they assumed that returning poll workers would remember what they did in the past. But some of these procedures, such as handling provisional ballots, had changed dramatically and poll workers were not warned of this or taught correctly. [Poll worker reports, Public

Hearings; Telephone interviews with poll workers; Interview with Booth Officials Manager Dane Thomas on 6/27/2006; Incident Reports]

4.136 Recommendation: We recommend that core training be shared by all poll workers and that specialized advanced training sessions be required thereafter. This approach has been used successfully by other counties. These counties generally separated training classes into two sections: one covering procedures, legal requirements and paperwork, and another covering hand-on training with voting hardware. This ensures that one area is not covered to the exclusion of the other, and allows better structuring of classes for the specific requirements of each section. For example, a section on procedures, paperwork and law can be delivered effectively to large groups, with the use of suitable visual aids and sound reinforcement by good training manuals. One large Ohio County effectively teaches this material to groups of 70 poll workers at a time. That same county, however, recognized the need for intensive hands-on training with new equipment, and broke up its hands-on section into many break-out groups with just three to five poll workers per instructor.

We recommend that a similar bifurcated approach be pursued here in Cuyahoga for the core classes, and that each small group break-out be comprised of the Judges for a given precinct. This would allow instructors to work closely with each team, ensuring good attention to questions and clarification, and would also allow the instructor to evaluate learner performance in class. Follow-up can occur with any learners who are not grasping the material adequately, with strategies including additional training, assignment to a different team to better balance the respective skill sets, or, as a last resort, respectful discharge with a special note of thanks for time served. Advanced training should also take account of the same norms, with larger class size being permitted for administrative procedures and much smaller for the advanced technical hands-on skills mastery.

4.137 Finding: EDT training varied widely, with some not receiving the full five hours of training. For example, according to one of the EDTs, a half-hour after a training session had started, people were still coming in and the trainer allowed them to remain for the rest of the training session. [Hearings and Focus Groups]

4.138 Recommendation: Trainers must enforce coverage and attendance rules. Advance notices to poll workers must advise them that if they are more than 5 minutes late, they will be excluded from the class.

4.139 Recommendation: As recommended above, one complete set of voting equipment and supplies should be available to each hands-on group, which we recommend be comprised of a single precinct team of four to six poll workers (depending on precinct size). As is the practice in another Ohio county surveyed, the hands-on team should go through the complete setup of Election Day, including mock voting. *Hands-on training should cover every single step* from supplies unpacking, inventory and proper use, machine setup, paper loading and threading, zero report printing, start of election on the DREs, mock voting (including all paperwork and special focus on proper ID requirements), election shutdown and final report printing, accumulation if it is to

continue to be performed in the polling places, and machine shutdown, paperwork reconciliation, and repacking of all supplies and equipment. Classes should cover the “big picture” needs for the various types of reports and how they are used. They should stress all security procedures and recording, and the reasons why this is crucial. Flow charts should be developed and printed to serve as a visual aid, so learners understand how the functions they are being asked to perform fit into the overall whole Election Day process.

Allocation of equipment for hands-on training sessions

4.140 Finding: The number of DREs available for use in hands-on training varied from class to class. Some classes allocated one machine per every two poll workers. For extra or make-up classes, only a few DREs were available, which did not provide the required opportunity for hands-on learning. Not all classes emphasized the same topics, with some covering the inventory and use of supplies, and others not doing so. Memory cards did not consistently function because they had not been properly cleaned, and thus some machines were unusable. [Interviews with poll workers; Public Hearings; interview with Booth Officials Department Manager Dane Thomas on 6/26/2006]

4.141 Recommendation: Prior to delivery at the training sites, the CCBOE should test the DREs and the other necessary supplies to ensure that they are functioning properly. Additionally, the CCBOE should teach the trainers how to clear the memory cards correctly, and require the trainers to do so after each training session. Fewer training sites, though still spread throughout the County, would augment the ability of the CCBOE to secure the DREs and supply these training sessions while avoiding logistical nightmares.

4.142 Finding: Some logistics issues for training classes occurred because the Trainers were not sufficiently scrupulous or well trained to handle security items correctly. Some voter access cards, supervisor cards, encoders and keys were all lost, misplaced or ruined in some manner.

4.143 Recommendation: The Panel has not been impressed with the level of regard for security issues that CCBOE Executive Managers have manifested. They evidently have little concern for the security risks, and thus have not ensured that their departmental managers, in developing policies and procedures, have translated those concerns into appropriate procedures. We have not been able to identify any managers who understand and respect the potential threats to the security of our election results, and the accuracy of the system more generally, by failures to account for and protect all security equipment. It is also not clear what role DESI may have played in understating the security risks presented by failure to protect security equipment. The CCBOE managers at all levels and the CCBOE Board should retain a reputable expert on DESI security issues to advise and consult on setting up appropriate security procedures and systems, and also consult on security training issues for the CCBOE staff and the poll worker trainers so that all understand fully the risks for the integrity of Cuyahoga’s votes and vote tabulation, and for the taxpayers’ financial investment in the equipment.

Training in provisional voting procedures limited by supply of code numbers

4.144 Finding: Trainers currently have no way to properly train poll workers on provisional ballots because the Secretary of State issues only limited numbers of provisional ballot codes that can be entered into encoders for these types of votes. Every time a voter is to vote provisionally, the Booth Official needs to enter a code number from the hard-copy provisional application into the encoder specifically for provisional ballots. These codes can only be used one time. Thus, if they were used in training they would not be available for use on Election Day. [Interview with Booth Officials Department Manager Dane Thomas 06/27/2006; Secretary of State Codes in the DESI training manual]

4.145 Recommendation: The Panel recommends that all provisional ballots be voted on optical scan paper ballots rather than on DREs.

Poll worker evaluation following training

4.146 Finding: No effective evaluation tool post-training has been created by the CCBOE. The trainers who worked this spring reported approximately 1% of the poll workers had not mastered training or were having trouble. This percentage is radically different from the interviews with poll workers and focus groups. Many attendees left training with incomplete or faulty understandings of their responsibilities and considered the training to be confusing. (Some poll workers stated that they were more confused after attending training than they were before the session.) The evaluation tool used by Spring 2006 trainers appears to have been self-serving, to try to convince the CCBOE that the trainers were doing a good job in their assigned tasks. [Incident Reports; Public Hearings; EDT logs; Interviews with Booth Officials Department; Excel chart of evaluations]

The CCBOE knew that some Judges would not be able to operate the DREs, but the Booth Officials Department did not have adequate procedures in place to identify these individuals. Training did not include any quiz or test, but only the hands-on opportunity, for some, to practice what they had learned about machine set-up. [Incident Reports; Public Hearings; EDT logs; interviews with Booth Officials Department]

4.147 Recommendation: As described more fully above, each portion (core and advanced) of a Booth Official or EDT training class should end with a quiz, where results are collected, compared to an objective standard, and used to evaluate the suitability of each poll worker for the role for which he or she is being trained. Poll workers performing below the acceptable standard should be required to attend remedial training and take another test, or to resign from the poll worker program.

Rebuilding poll worker morale and participation

4.148 Finding: Because of various DIMS database problems, poll worker payroll processing and paychecks were delayed.

4.149 Recommendation: Speedy payroll processing has to be a priority. This communicates the CCBOE's value of the poll workers' services.

4.150 Finding: Feedback and recommendations have not been solicited from the poll workers.

4.151 Recommendation: An efficient mechanism for feedback must be established. The Quality Manager and Training Coordinator should both receive summaries of these reports.

4.152 Finding: Respect for the Judges, who are paid a flat rate for service on Monday night and Election Day, can be shown by properly training and supporting them in their election activities, and by packing the supply bags carefully so that all items needed are correctly and completely provided. This small but crucial step would make a great difference in how the Judges approach their task—and would facilitate their using their time efficiently instead of making repeated searches for supplies and calls for substitutes.

4.153 Recommendation: Top management should establish and enforce policies at all levels of the agency which build and communicate respect for Poll Workers. These policies should be structured to alleviate all the deficiencies identified in this chapter and elsewhere in this Report, and any others which counteract the goal of a motivated, well-educated, reliable force of temporary polling place employees. Year-round communications and training/development opportunities should be sustained. This should include a regular newsletter which provides opportunities for development, glimpses of changes, new requirements, and new opportunities which may be forthcoming. Small gestures should be made to show care and appreciation for this critical team of thousands who make each Election Day function and, notably, who serve as the county's direct contact with each voter. Additional ways to show respect should be considered by a creative human resources manager. (Other counties make such gestures as birthday cards for poll workers and special certificates of appreciation.)

4.154 Recommendation: Pointing to public statements by the Director, many of the poll workers feel that the BOE has blamed them for all the problems on May 2nd. The CCBOE executive management has still not publicly acknowledged its own mistakes and misjudgments in training the poll workers and equipping them with error-filled and confusing Manuals. Many poll workers feel they are owed a very public apology for the negative way the BOE has portrayed the poll workers in the media. The Panel believes such an apology is overdue. It would also help repair relations with poll workers and assist in their continued Election Day participation.

4.155 Recommendation: If any other problems arise on an Election Day, CCBOE executive managers and Board Members should not rush to judgment and make public announcements as to the causes of any problems that might be complex and not obvious. The Director should take full responsibility publicly and apologize promptly to the public, pledging a quick and impartial inquiry and remediation with a full public report. The Director should seek to establish such candor and impartiality that the public can

trust that an internal investigation will get to the full facts quickly, and that another independent Election Review Panel will not be needed in our lifetimes.

Voting Locations Issues

Poll worker competency in opening and maintaining the polls is, to some degree, dependent upon the adequacy and readiness of the voting location. The voting locations tasks are similar to those of the Booth Officials: early and complete preparation, and a support network that facilitates their efficient functioning throughout the day. Much greater coordination between the current Booth Officials and former voting locations departments must occur.

4.156 Finding: Many polling locations cannot be secured after delivery of machines but before the election (e.g., a basketball game scheduled for the gym which will be used for the election).

4.157 Recommendation: The lack of security for the DREs must be faced and remedied so that the security of the elections and the financial investment in the voting machines can be properly protected. The punch card system deliveries were far less vulnerable to unsecured locations than are the DREs.

4.158 Finding: The demands of preparing voting devices for May 2nd were so intense that the voting location analysis and checking could not be done nearly as thoroughly as in other elections. The duties imposed great stress on the department manager who had expertise and high standards for qualifying voter locations. Normally the last two weeks before an election allows for a series of QC (quality control) steps for voting locations, but this was not possible given L&A testing, low staffing, and other demands.

4.159 Recommendation: The Voting Locations Department should be separated from the Voting Devices Department and returned to the CCBOE offices. It should have adequate staffing for fulfilling its duties. It should closely coordinate its activities with the Booth Official Department

4.160 Finding: The Voting Locations Department has the primary duty within the CCBOE of ensuring that agencies in the County that are covered by the National Voter Registration Act (NVRA) are sufficiently supplied and informed of their duties. Unfortunately this is another task that has received low CCBOE priority. [Department handout of duties; Interviews with Managers and Coalition]

4.161 Recommendation: The Manager of the Voting Locations Department and the CCBOE Director should set up a meeting with interested representatives of the public (such as the Greater Cleveland Voter Coalition) and with the county agencies covered by the NVRA to discuss allegations of noncompliance and strategies for better compliance with this Federal Act. Performance objectives should be created and monitored so that the CCBOE can greatly improve its compliance.

Chapter V: Election Day Management

Election Night transmission of voting data

5.1 Finding: One of the major potential advantages of electronic voting is the degree to which it could speed up transmission and tabulation of voting results on election night. Data can potentially be relayed from the polling place to the CCBOE at the speed of light, and the votes can be counted in minutes rather than hours. When the transmission of electronic voting data is poorly planned, tested and executed, however, it can slow the computation of election results and introduce opportunities for error, delay and tampering. [GAO report to Congress, Sept. 2005, #GAO-05-956, p2]

5.2 Recommendation: To realize the potential of electronic voting, the CCBOE needs a well-orchestrated election night protocol for getting data from the polling places to the CCBOE efficiently, securely and without loss. Such a protocol was not in place on May 2nd. The Panel recommends the elimination of polling place accumulation and transmission of voting data, and the implementation in its place of a sound and secure process for physical delivery of memory cards to the CCBOE for direct uploading.

Cuyahoga County's Election Day plan

5.3 Finding: For the 5/2/2006 election, CCBOE chose to implement a multi-stage process for accumulating precinct vote data as soon as the polls closed and transmitting those data to the GEMS server at the CCBOE for tabulation.

The steps to be taken were as follows:

1. Before the DREs were delivered to the polling places prior to the election, one DRE at each polling place was designated the "zero machine" and marked with a sticker.
2. Once the polls were closed, polling data from each DRE at a polling place were to be loaded (accumulated) into the zero machine. The accumulated data were then to be transferred to a single card (the "zero card") which would contain all of the voting data for that polling place.
3. The zero cards were to be transported to one of 45 designated upload stations scattered throughout the county.
4. One DRE machine at each upload station was to be configured to use a telephone modem to transmit the election data contained on each zero card to the CCBOE for tabulation.
5. All memory cards were then to be transported, along with the election materials, to the CCBOE. The upload stations were to be vacated by 11 pm, so the window during which all cards had to be transmitted was approximately three hours or less.

[CCBOE Booth Official Training Manual, May 2006; staff interviews]

Transmission testing procedure

5.4 Finding: Immediately prior to the May 2nd election, the CCBOE performed the final testing of the election night data transmission procedure they had designed. The CCBOE facilities did not have a sufficient number of telephone lines to test the modem transmission procedure prior to the election. Due to this limitation, approximately 60 CCBOE employees were selected to take one or more DREs home with them for the weekend before Election Day. They were to connect their home telephone lines to upload test voting data to the CCBOE computer. This testing was problematic on a number of grounds. [Interviews with CCBOE staff; IS staff; Deputy Director Dillingham; Director Vu]

Releasing DREs to employees to take home was a troubling breach of security. It created an opportunity for tampering and raises doubts about the CCBOE's commitment to election security and to promoting public confidence. Even without any malfeasance on the part of the CCBOE staff who took DREs home, the potential for tampering existed by others with access to the workers' homes. Given the CCBOE's rules mandating the presence of representatives of both major political parties at each step of the election process, it is hard to imagine that they did not see the problems created by letting individuals take the machines home. [Interviews with CCBOE staff and election workers; See also: Tracy Warren, Kelly Ceballos, Lloyd Leonard, and Jeanette Senecal, *Helping America Vote: Safeguarding the Vote* (Washington, D.C.: League of Women Voters, July 2004)]

5.5 Recommendation: A strict chain of custody must be observed for all election systems. DREs should not be taken from the CCBOE facilities except for elections or repair, and never be taken to employees' homes.

5.6 Finding: The testing was also significantly flawed because it was a very poor simulation of an election-night scenario. The test transmissions from employees' homes were staggered over a 48 hour period, while the CCBOE mandated that election night modem transmissions be completed before 11pm. This limitation meant that, on election night, the modem transmissions from each upload station, consisting of all election data from of each of the 584 polling places, had to take place within a window of approximately 3 hours. The volume of data transmitted during each test transmission did not necessarily reflect the volume to be transmitted on election-day. [Interviews: CCBOE staff; IS staff; Deputy Director Dillingham; Director Vu]

5.7 Recommendation: The CCBOE should attempt to simulate real operating conditions when testing its systems and equipment.

What went wrong on Election Night?

5.8 Finding: Memory card accumulation was a source of confusion and error at polling places. Poor training and instructions led to mistakes. Poll workers unfamiliar with the DREs or with computers generally caused memory cards to be left in machines, placed in

the wrong bags, covered with tape and never fully accumulated. Some workers got frustrated and returned the cards without having accumulated the results at all. [Interviews with CCBOE staff and poll workers]

5.9 Recommendation: Polling place accumulation should be abandoned and all memory cards used in an election should be returned to the CCBOE for tallying of results.

5.10 Finding: The accumulation problems experienced by poll workers delayed the delivery of the zero cards to the upload stations, further shortening the original three-hour window during which all data had to be transmitted. The failure of poll workers to understand and follow mandated memory card security and chain-of-custody procedures compromised the security and integrity of the data on the memory cards. [Interviews with CCBOE staff and poll workers]

5.11 Finding: The logging by the CCBOE of tamper seals used to secure the memory card door on the DREs at the polling places was inconsistent. Following the election, the cards were not properly secured, sealed and logged for transport. The CCBOE's memory card handling procedures for the May 2nd election may have so deviated from approved practices as to void the NASED certification of the DREs. [Interviews: warehouse staff and Deputy Director Dillingham) (See April 2006 NASED Memorandum on Memory Cards)]

5.12 Recommendation: Accumulation should be abandoned and poll workers and CCBOE staff should be trained to treat memory cards with the utmost care.

5.13 Finding: The convoluted transmission procedure chosen for the May 2nd election would have been awkward even had everything gone smoothly. With the added factors of inadequate worker training, poor testing, human errors and a general lack of familiarity with electronic voting procedures, the election night transmission and tabulation of data was chaotic and incomplete. Security practices were overlooked in the rush to get the voting data from the polling places to the CCBOE central computer. [Interviews with IS staff, poll workers]

5.14 Finding: Some very basic and foreseeable problems at the upload stations led to other transmission problems. In one case, the electrical outlet on the wall at the zone station was too far from the telephone jack to permit the power cord and the modem cord of transmitting DRE to be plugged in at the same time. Workers had to transmit data with the DRE running on battery power and hope the battery power would last until transmission was finished. A simple extension cord at the zone station could have prevented this problem. [Interviews with IS staff, poll workers]

5.15 Finding: As one might expect, the large volume of simultaneous transmissions degraded performance at the CCBOE central computer, increasing connection and transmission times as well as the likelihood of dropped connections. Because the testing the prior weekend took place over a 48 hour period, the glut of incoming data was not identified as a potential problem. CCBOE's confidence in the soundness of the

transmission procedures, based, in part, on the results of the unrealistic tests, contributed to the transmission bottleneck and overall chaos at CCBOE on election night. [Interviews with IS, Ballot Department, pink room staff, poll workers, former staff, consultations with current and former elections officials in California and Washington]

5.16 Finding: The system performance degradation due to the large volumes of data being transmitted to the CCBOE at the same time meant that many zone stations were unable to finish transmission. Workers had to return cards to the CCBOE without having been able to transmit their data. [Interviews with IS, Ballot Department, and pink room staff, poll workers]

5.17 Finding: Because the transmission problems and delays prevented many upload stations from completing the data transmission to the CCBOE within the allotted time, many memory cards had to be uploaded upon return to the CCBOE. The CCBOE had to spend considerable time searching for all of the un-transmitted cards to upload their data for tabulation due, in part, to the fact that the cards were scattered throughout the many bags being returned to the CCBOE. Some cards were still in the DREs and some were missing entirely. Because all upload stations closed at the same time, taxis from the upload stations converged on the CCBOE at the same time, creating a traffic jam and delaying the uploading of cards that were not transmitted. [Interviews with IS, Ballot Department, and pink room staff, poll workers]

5.18 Recommendation: Modem transmission should be abandoned and each memory card should be transported to the CCBOE for upload and tabulation. The transmission process needs to be simplified and tested adequately to identify the weak points.

5.19 Finding: The numerous media on which voting data were stored (DRE memory cards, zero cards, CCBOE central computer, DRE internal memory, VVPAT paper rolls) led to general confusion of poll workers and CCBOE staff as to which medium carried the official votes. No single medium took on the “precious cargo” status of the paper ballots and ballot boxes of old. [Interviews with IS, Ballot Department, and pink room staff, poll workers]

5.20 Recommendation: Voting place accumulation of memory cards should be eliminated. The combination of polling-place accumulation, physical transportation of memory cards to upload stations, and modem transmission to the CCBOE, entails all of the hazards of both approaches with few of the benefits of either. Technical failures impeding modem transmission are combined with the risks and delays of physical transportation. All DRE memory cards should be transported to regional sites so that they can be gathered up and transported to the CCBOE for upload. The CCBOE facility should be configured with additional capacity for on-site memory card uploading (either by a large LAN of DREs or a collection of EMPs, should they be certified), and staffed with CCBOE staff familiar with the uploading process. Testing should be done to determine the amount of hardware at the CCBOE that will be needed to upload each memory card from each DRE on election night, and how many EMPs would be needed to speed the process up should they be certified for use in Ohio.

5.21 Recommendation: The memory cards from each individual DRE should be treated by all involved as precious cargo akin to paper ballots, and workers should account for, transport and secure them with the same care they would paper ballots. Without the accumulation step, there would be no need for zero cards, no partial uploads, and workers would know that, whatever mishaps or glitches they encounter in closing down the polls, their main duty, above all others, is to get the cards back to the CCBOE. Pink room personnel should not accept memory card bags that do not have every card used at the polling place accounted for. Resort to the internal DRE memory to download election data should be limited to extraordinary circumstances in which a card is damaged or lost entirely. The VVPAT rolls should be segregated and secured for use in a recount or audit. [SOS Advisory #2006-03 states: “Cards should be treated as ballots and handled with the same standard of care...To the greatest extent possible, when defining your card handling procedures please give consideration to voter confidence, audit-ability and security”; see also GAO Report # GAO-05-956, p41]

5.22 Recommendation: Testing for any new procedure should, to the greatest degree possible, replicate election night condition, and should be conducted on a schedule that allows adequate time prior to the election to address whatever flaws are exposed in testing. Testing procedures at all levels should be documented and published, with specific criteria for passage and failure.

5.23 Finding: Incident Reports, or “Pink Sheets” are the primary mechanism by which the CCBOE tracks problems reported by poll workers. All precincts are supposed to document the range of possible problems experienced on Election Day, and each poll worker and Presiding Judge is required to sign the resulting report. The Pink Sheets could be an invaluable documented record of supply problems, voter registration problems, and operational difficulties.

However, numerous problems regularly arise with the Pink Sheet mechanism. First, the CCBOE could only manage to produce 1,260 of 1,434 total Incident Reports. Many of these Pink Sheets were incomplete or blank. A number of these reports are unsigned by all poll workers, and several are completely unsigned. It is possible that precincts plagued with poll worker and EDT absences, mechanical failure, poor training, and inadequate supplies for the election were too overwhelmed to fully document the deficiencies. Even precincts with serious reported problems, such as failures to open the polls on time and long lines at the polls, neglected to include opening times or average wait times of voters. Often poll workers neglected to include whether or not an absent poll worker or EDT arrived or was replaced, whether a broken DRE or printer was repaired, or what steps were taken with any failure/success to remedy a problem. Some technical glitches that didn't appear on Pink Sheets were reported on security event logs.

5.24 Recommendation: Poll workers must be given sufficient motivation to document problems at their polling places. That motivation can come in the form of positive or negative reinforcement for their performance on this measure.

5.25 Finding: The election night activities of the “Pink Room,” the final destination for polling supplies, have been repeatedly described by staff as chaotic. The blue and red bags containing supplies from polling locations are too large for the Pink Room. The compilation and remote transmission of election results met with mixed success. The combination of late closing of polling locations, early closing of the uploading stations and the failure of poll workers to comprehend or follow packing instructions resulted in missing memory cards and unnecessary work. Many of the 45 uploading stations could not complete their work because of the hours of operation of the locations selected. As a result the staff stationed in the Pink Room was quickly overwhelmed with materials and was not able to readily determine if individual memory cards were uploaded. [Staff interviews; walk-through of election night procedures]

5.26 Recommendation: The CCBOE must call upon the experiences of May 2nd and completely redesign the election night processes and the flow of manpower and materials in the Pink Room. Emphasis should be placed on separating clear bags containing memory cards, voted paper ballots and alphabetical poll books from the red/blue bags and moving the red/blue bags into the basement where the remaining contents can be removed at some later date. *Please see Recommended Election Night Process, Appendix D.*

5.27 Recommendation: The CCBOE must commit to either having all memory cards uploaded remotely, or none of them. Transmission sites should be selected based on the flexibility of their hours, and the need for adequate staffing must be addressed. Staff assigned to the sites reported mixed success. Some had no problems but ran out of time, while others were not successful and had to ask poll workers to “volunteer” to stay and help them. This Panel’s recommended course would be to eliminate the transmission of results, and to have all memory cards delivered directly to the CCBOE for processing. Eliminating the uploading stations will allow the CCBOE to keep experienced staff at the Board office and allow them to participate in the effective movement of materials through the Pink Room on elections night.

5.28 Recommendation: CCBOE staff should also be assigned to familiar areas of the county. Staff repeatedly expressed concern that they were sent to locations on the east or west side while those living in the area were sent to the opposite side of town. This resulted in a delay because staff was either lost or slow to arrive at the location because they were not familiar with the area.

5.29 Recommendation: The location of supplies, especially crucial ones such as memory cards, should be made as obvious as possible. This could be easily accomplished either by specifying uniform packing locations for supplies with labels on the red and blue bags, or by a distinct, easy to follow itemized supply checklist.

5.30 Recommendation: The CCBOE should begin recruiting election night staff immediately after the last election. This will insure that you have sufficient staff to maintain partisan balance, check in the precincts as they arrive, load the vans and accompany the red/blue bags to the CCBOE. The cabs should leave for the CCBOE at

9:00 or when all locations deliver their supplies, whichever is sooner. Any remaining bags not arriving at the transfer station will be delivered to the CCBOE by the Board staff assigned to that transfer station.

5.31 Finding: The CCBOE hired 69 taxi cabs from Yellow Cab Company to take election observers to various precincts at 6:30 PM on Election Day to assist in loading voting bags after voting was completed, and drive the bags (accompanied by Election Observers) to a warehouse. After voting concluded, the taxi drivers were told to help load the voting bags into the cabs and return to the warehouse to drop off the bags before 10:30 p.m. As it turned out, only 30-35 of the vehicles were initially accompanied by election observers. According to the Cab Company, Election Officials drafted people from off the street to fill many “election observer” vacancies.

Many drivers weren’t given assistance with loading voting bags after the voting concluded, and many were treated harshly by precinct workers. Finally, most cab drivers didn’t get back to the warehouse until 11:15 or later. As a result, the Yellow Cab Company requested an additional \$25.00 per taxicab used for transportation on Election night. As of 7/6/2006 the CCBOE had not granted the Yellow Cab Company additional compensation. [Yellow Cab Company Letter to Procurement and Operations Manager Gorman, 5/31/2006; Phone interview with Procurement and Operations Technician Dan Trif 7/6/2006]

5.32 Recommendation: The CCBOE should grant the cab company reasonable additional compensation. The CCBOE should provide a list of the Election Day observers to the taxi cab company, who can then remind the observers of their commitments. Additionally, the CCBOE should engage the cab companies to determine ways of improving the process of transporting personnel and voter equipment. Cabs are an essential component of Cuyahoga County’s Election Day Operations, and should be treated as such.

The Presiding Judges should post each DRE’s results at the polling location

5.33 Finding: Under ORC §3505.30, “when the results of the ballots have been ascertained, such results shall be embodied in a summary statement to be prepared by the Judges in duplicate, on forms provided by the board of elections. One copy shall be certified by the Judges and posted on the front of the polling place” A 1/7/2006 Secretary of State Memorandum, however, referred to this section as “outdated” and stated that the “centralized posting of voting requirements at the Board of Elections through the centralized accumulation of all ballot results on Election Night” supersedes that statute.

5.34 Recommendation: Although the SoS does not require election boards to comply with that statute, posting results at the polling location would help (1) assure that the no one has tampered with the results contained in the DREs or memory cards while the poll workers transfer them to the CCBOE and (2) instill confidence in voters. So, the CCBOE should require the Presiding Judge to post a signed copy of the Long Report for each

DRE at the polling location. The Presiding Judge should also put a disclaimer stating that the results are unofficial and subject to change because of absentee ballots and the acceptance of provisional ballots. So, the Presiding Judge would not post the results to declare a winner.

The CCBOE should also make available, on its website, a list of each DREs results organized by polling location, so that interested parties or voters could verify that the results posted at a polling location are the results that the CCBOE used in its official and unofficial tallies.

Chapter VI: Ballot Count and Post Election

Hand count and ballot remake into DRE votes

6.1 Finding: On 5/2/2006 in the early morning hours, Director Vu became convinced that the optical scanners would not count optical scan ballots accurately. He then proposed to the SOS via phone call to Judy Grady that the CCBOE commence a hand count for the initial canvass a/k/a “unofficial count.” The CCBOE did not make any effort to ensure partisan balance in counting teams (of readers and recorders). The CCBOE used workers from temporary agencies who did not conduct any background checks. Although the CCBOE requested literacy skills in the temp workers from the agency, the CCBOE did not independently ascertain this capacity.

The Director prescribed 12 hour shifts for all temp workers involved in the hand count. The CCBOE did not generate a written statement of standards to govern what marks (such as an X, a partially filled in oval, or underscore of a candidate name) would be counted as a vote. Deputy Director Dillingham orally informed the initial CCBOE managers who were assigned to supervise the hand count that the only marks that would count were those that an optical scanning device would have read; thus, an X in an oval would not count. The managers restated these directions as each new shift of workers and supervisors arrived. [Interview with Director Vu and Administrator Platten; with department managers and other CCBOE acting as supervisors of temporary hand count workers]

6.2 Finding: While the initial hand count was proceeding, Director Vu began to develop a proposal for tabulating the optical scan ballots in a manner different for the “official” count (that precedes the certification of the vote). At base, this new procedure for tabulating the optical scan paper ballots was a type of “ballot remake,” which in the past has been used where the original ballot cannot be counted by mechanical means and must be “remade” to be properly counted by machine. Director Vu’s approach was to propose converting or “remaking” each paper ballot into a DRE-record that would then become a part of the same database tabulation as the votes cast on DRE units in the polling locations. [Interview with Director Vu]

Before May 10, the CCBOE discussed with the SOS representatives its proposed procedures for “remaking” the optical scan ballots in the DREs. The SOS orally confirmed the CCBOE’s planned procedures. Chairman Bennett’s reference to that discussion is the only record of it ever happening: “[c]onfirmation and approval has been given, by the Secretary of State’s Office, to record the optical scan ballots using the electronic touch screen voting units without printing the voter verifiable paper trail.” The CCBOE included, as an attachment, its procedures for remaking the ballot in its 5/10/2006 letter to the SOS. [Chairman Bennett’s 5/10/2006 letter to Monty Lobb, Assistant Secretary of State; interview with Deputy Director Dillingham on 7/18/2006]

6.3 Finding: No Ohio statute or SOS memorandum, advisory, or directive details how a BOE should count ballots under these circumstances. Under ORC §3506.16, however, BOE employees may remake paper ballots in teams of two, one from each major political party. SOS Directives and Advisories; ORC §3506.16.

The CCBOE did attempt to set up DRE remake teams that reflected partisan balance (with Republicans and Independents/NonAffiliated balanced against Democrats) as detailed in the statute. [Interviews with Linda Steimle and Betty Jones]. The CCBOE assigned paired teams of two temporary employees to remake the optical scan ballots by manually entering them into DREs. The CCBOE set up ten-hour work shifts where virtually all workers had to be standing on their feet for the entirety of the work shift. The CCBOE suspended the count for Mother's Day on 5/14/2006. [Interviews with Linda Steimle and Betty Jones; Deputy Director]

The CCBOE did not run background checks on or give literacy tests to workers who remade the ballots on the DREs. The Deputy Director said that the Administrative Assistants were in charge of the hiring and that the CCBOE did not hire applicants who marked "felon" on their applications. Although the CCBOE had no policy on witnesses, it did require party balance during the remake process. [Deputy Director; Administrative Assistants]

The Panel has received conflicting information regarding whether the CCBOE distributed any written rules to the worker teams for DRE remake of the optical scan ballots. The Deputy Director stated that these procedures governed, and that they were distributed. But at least three managers whom the Panel interviewed said that they never saw any written handout and that, again, the top managers told them to provide oral instructions to the workers:

1. Review paper ballot to ensure there are no questions regarding voter intent. If you have questions about a vote for an office please ask a supervisor;
2. Insert voter access card;
3. Ensure that political party (democrat, republican, or issues), municipality, ward, and precinct on paper ballot match the political party, municipality, ward, and precinct on the TSx unit;
4. One person will read the office and the candidate choice, and the other will select that candidate name/issue by touching the screen next to the name;
5. Once the entire ballot has been selected, a summary screen will appear;
6. The person who read the ballot will review the summary screen while the person who selected the candidates on the TSx unit reads the names back from the paper ballot; and
7. Once both team members are certain that the TSx unit reflects the paper ballot exactly, touch the cast ballot on the TSx unit.

[Instructions for voting optical scan ballot on TSx unit in teams of Democrat and Republican; interview of Deputy Director Dillingham on 7/18/2006]

6.4 Finding: Although the DRE units are designed to function only with the VVPAT printer units properly installed, and the DRE printer could have created a paper trail recording the votes, the SOS instructed the CCBOE not to permit the DREs to print the paper receipt. The CCBOE accomplished that instruction by loading the paper backwards so that the printers did not have a surface on which they could print.

The CCBOE did not agree with the SOS's decision, which it had given orally, to have the DREs set up so they were unable to create a VVPAT. [Instructions for voting optical scan ballot on TSx unit in teams of Democrat and Republican; interview of Deputy Director Dillingham on 7/18/2006]

6.5 Recommendation: The Ohio General Assembly should specify via legislation the legal standards for conducting hand counts when optical scanners fail. The statute should address not only what marks shall count as “voter intent” but also address how many persons shall be involved and in what roles (readers, recorders, supervisors); whether partisan balance is required in all roles; what the public’s and candidate’s rights are to witness the count; whether, if the BOE uses a DRE system in addition to the optical scanners, an optical scan ballot can be remade into a DRE ballot, and with what procedures; and what kinds of steps shall be taken for tallying the vote and for quality control throughout. The U.S. Election Assistance Commission’s study on Vote Counts and Recounts under the direction of Prof. Thad Hall should be consulted for sister State standards and emerging Best Practices for hand counting procedures.

Until legislation is enacted, the Ohio SOS should issue a Directive specifying the interim standards for what shall constitute “voter intent” on an optical scan ballot that is subject to hand counting procedure or remakes. Additionally, the interim standards should address all the questions listed above.

In both the legislation and in any Interim standards, we urge the officials to seek to establish procedures well designed for achieving the highest standards of accuracy and public accountability in hand count/remake procedures.

Finally, whether by legislation or Directive, this Panel recommends that the VVPAT printer units should not be disabled when engaged in vote counting on any DRE units.

6.6 Finding: The only observed method for tracking Election Day problems and their solutions at the CCBOE is the Incident Report, or “Pink Sheet,” a brief listing of issues faced by individual booth workers. These Pink Sheets are attached to the inside front of each poll book, one for each of 1434 precincts. A space approximately 6 inches long is provided for description of any given occurrence. After the election, copies of all 1434 Pink Sheets are circulated to all CCBOE departments. Each department is to look these over and pick out the issues which they feel are theirs to address. When the department has investigated and corrected the problem to their satisfaction, someone is to place a red check mark, anonymously, next to that problem listing on the original Pink Sheet in the poll book. No record is made as to what corrective actions were taken. This system provides no accountability for correcting the problems, no assurance that each problem

will be addressed, and no method for tracking trends or reoccurrences. This system also ignores all problems that appear to regular CCBOE staff at times other than Election Day. [Interviews with the Deputy Director; site visit and inspection of poll books; CCBOE procedural manuals]

6.7 Recommendation: The CCBOE should replace the “Pink Sheet” arrangement with a comprehensive quality assurance program. This program should involve all areas of the Board’s year-round operations, including Election Day, and it should insure that each issue will be seen through to permanent correction.

1. Exhaustive, step-by step procedures should be established and written out for every process performed by CCBOE staff or proxies, leaving nothing to the imagination. This standardized format would include anything from planning a major operation to transferring a single document between departments.
2. Any observed deviation from these procedures, should be recorded on a standardized form and submitted to *one* person whose primary responsibility is to track and correct non-conformances.
3. This individual should classify the occurrences as to type and source, according to established objective guidelines, and then record this information in a database.
4. The coordinating individual should determine who was involved in the occurrence and work with them to insure that they are aware of the procedure and understand it. It may turn out that the operating procedure was inapplicable or unfeasible, the realization of which could lead to a refinement in operations.
5. The coordinator and other involved parties should sign off on a mutual understanding of the problem’s solution.

The coordinator of this program would be responsible for compiling, analyzing, and interpreting non-conformance data. Periodically, he or she should meet with the Board (and ideally a cross-departmental team) to present findings, discuss trends, and evaluate solutions. The benefits of such a system include increased transparency for the public, heightened awareness for the Board, and continuous improvement of election processes. *For more details, please see the Appendix F, Quality Assurance and Continuous Improvement proposal, with exhibits.*

6.8 Recommendation: The Ballot Department should be managed by a trained election official. Though many aspects of ballot creation and handling are now computer controlled, this does not mean that they are principally computer issues. They are election issues and should be approached as such.

6.9 Recommendation: The department cannot operate with an obsolete manual. Procedures for running a ballot count operation cannot be devised on the fly during the course of an election. These procedures should be established and tested on a full-election

scale, long before preparations for the real thing begin. Official procedures must be written out, agreed upon, checked with code, and published in a new manual as soon as possible.

6.10 Finding: During the official count process in advance of the Official Certification of the May Primary election the CCBOE was faced with the prospects of having to hand count over 18,000 optical scan ballots cast by absentee voters. After hand counting these ballots for the unofficial count the CCBOE was considering the alternative approach of “remaking” the ballot by having CCBOE staff transfer the votes recorded on the optical scan ballot to a DRE.

While determining the appropriateness of their strategy the CCBOE in the person of Director Vu sought the advice from the Secretary of State as to the appropriateness of this option. Director Vu discussed the matter with Judy Grady and Pat Wolfe of the Secretary of State’s Office who agreed with the idea of remaking ballots but specifically asked that no VVPAT record be printed. The CCBOE was instructed to turn the VVPAT paper backwards so the tape would be process through the machine on the unprintable side. This action prevented the DRE machine from creating a paper tape that could be used to verify the data entry activity performed by the CCBOE staff. [Email from Director Vu on 7/7/2006; May 2006 primary election Official Canvass Plan; Robert Bennett letter on 5/10/2006]

6.11 Recommendation: In the event that the CCBOE should ever find itself in a similar position again and is forced to transfer optical scan ballots to a DRE, the CCBOE should create a paper tape. This VVPAT tape should be used as a quality control check to insure that the votes were recorded accurately and be made available for any recount involving absentee ballots. After the official count is complete the VVPAT should be kept as a record for a time and in a manner that is consistent with all other VVPAT records produced for the election in question.

6.12 Finding: Auditing at the DRE level is difficult in the GEMS system. Once vote totals are uploaded into the server, the smallest detailed breakdown possible is by polling location. In other words, although GEMS can produce a report that shows each DRE’s total results, it cannot produce a report that shows the number of votes cast in the DRE for each candidate. No clear reason exists why the GEMS software could not be configured to produce a report on demand that would track and/or isolate the detailed results from a given DRE based on digital signatures. An audit program that will be used for the August election and beyond allows tracking of every Voter Access Card transaction on a given DRE, but it still does not allow a detailed breakdown of final results by machine in any GEMS output. If a security breach were to be discovered on any DRE after an election, it would be difficult to determine which ballots came from it. [Interviews with Tyrone Howard 7/13/2006 and 7/14/2006, interview with Brian Cleary 7/13/2006 and 7/14/2006]

6.13 Recommendation: Although GEMS cannot print a report that shows a DRE’s detailed results (i.e., results for each candidate), interested parties or the CCBOE could

audit a DRE by following these six steps: (1) print a GEMS report that shows the detailed results for the entire polling location; (2) upload all memory cards except the missing memory card's copy from that polling location's DREs into a duplicate data base; (3) print a report that shows the duplicate database's detailed results; (4) subtract those results from the GEMS report printed in step (1); (5) print a paper tape from the DRE whose memory card is missing, or which otherwise is in question; and (6) compare that paper tape to the GEMS report minus the results from the duplicate database. The only thing that might make it impossible is that this process would have to control for provisional ballots cast on DREs, the process for which remains unclear to the Panel. If at all possible, the GEMS server should immediately be modified to allow tracking of detailed results by which piece of equipment they came from.

6.14 Finding: The CCBOE erroneously reported the number of write-in votes received by various candidates in the May Primary based on a clerical error by a member of the CCBOE Ballot staff. The DRE machines generate a report showing the names of individuals receiving write-in votes on the left side of the page and the actual number of votes received on the right side of the page. The staff person was instructed to highlight the names of any eligible write-in candidate in one color, highlight the name where there was uncertainty of voter intent with another color and strike through those write-in ballots cast of individuals who were ineligible to receive write-in votes in the May primary.

Those ballots with questions concerning voter intent were decided on by the Director and Deputy Director of the CCBOE. The Ballot staff person was then instructed to tally the votes and report the results for inclusion in the unofficial vote tally. The staff person did as instructed, but rather than counting the number of votes in the right column she counted the number of times the name appeared in the left column, significantly understating the number of votes cast for write-in candidates on 5/19/2006. For any given candidate, only the first vote from each precinct was counted. The error was only discovered after a write-in candidate complained that all her votes were not counted.

As a result of a recount of the write in votes after the official count was certified, one democratic precinct committeeman race was overturned (Cleveland 15Q) and a candidate who previously did not qualify for the November election as a write-in candidate for State Representative in the 13th House District was qualified. A few of the more extreme examples include:

<u>Candidate</u>	<u>Office</u>	<u>5/19/2006</u>	<u>6/13/2006</u>
Roger Kramer	Common Pleas Court	105	1,399
Michael Blumenthal	Common Pleas Court	103	1,247
John P. Hildebrand	State Rep 13 th District	27	109
Michael O'Shea	State Rep 16 th District	65	385

[Interview with Ballot Department Manager; Examination of Ballot Department internal communications]

6.15 Recommendation: In addition to the obvious clerical error by a member of the Ballot Department, the failure of the CCBOE to have clear policies and procedures and adequate staff training for how to count write-in ballots in advance of the May Primary election created an environment that increased the likelihood of errors. In advance of the next election, the CCBOE should immediately adopt and promulgate policies and procedures for all of the activities related to collecting, counting and recording all votes regardless of the medium used to record those votes. The CCBOE should immediately contact neighboring counties that have operated in an electronic voting environment before this year and ask them for copies of their policies and procedures as a starting point.

6.16 Finding: The Ballot Department went into the May 2nd primary with no clear procedure for counting write-in ballots. When Bob Baker started as head of the department, his only training for write-ins was being handed a DESI manual with a section on the subject. During the unofficial count, it was estimated that the DESI method would take up to four or five days, while a hand-count could be completed in half a day. The department decided to proceed with the hand-count of write-in ballots. [Staff interviews; interview with Ballot Department Manager]

6.17 Recommendation: The Ballot Department should consult with DESI and determine if the procedures in its manual can be sped up or shortened to provide for timely reporting of unofficial results. Regardless of what method is adopted, the department should work it out in detail, agree upon it, and publish it in an official procedure manual as soon as possible. Write-in counts, like all other vote counts, should proceed in a uniform and predictable manner.

6.18 Finding: The Booth Official Training Manual does not instruct poll workers to print out the Long Report, the report that shows the results by precinct. In fact, the Booth Official Training Manual instructs poll workers not to print out that report. Under a SOS directive, for a recount the “board must select one or more whole precincts whose total equals at least 3% of the total vote.” By not having an official copy of this report — i.e., a copy in the sealed canister — the CCBOE had no way of knowing precinct totals and could not fulfill the SOS’s requirement without counting all precincts. [Booth Official Training Manual, page 49, step 15; Directive No. 2006-50(F)(3)(b)(3)]

6.19 Recommendation: The CCBOE should change the Booth Official Training Manual to require poll workers to print the Long Report. The Long Report should be printed from each DRE used in a location

6.20 Finding: As of 6/22/2006, 51 days after the May Primary election, the CCBOE has yet to recover 12 lost memory cards. Missing cards did not result in votes going uncounted. When these cards could not be found, substitute memory cards were prepared and used to collect vote data from the DREs in question, which were then uploaded and included in tabulated results.

The missing cards by voting location are as follows:

- AJ Rickoff, #8
- Brook Park Recreation Center, #2
- Eastman Branch Library, #1 and 8
- McKinley Elementary, #12, 13, 14, and 15
- Mt. Olive Baptist Church, #7
- Orange Village Hall #0
- Randallwood School, #4
- Robert Fulton Elementary, #8

In addition, staff at the warehouse found three substitute memory cards, two for Woodbury Elementary and one for Brookview Elementary, in three machines (#239611, 241468 and 251478) that were assigned to Woodbury Elementary School. The Ballot Manager did not know how the cards ended up in the devices or why they were not removed before the devices were returned to the warehouse. They are not listed among the missing cards because the original memory cards for Brookview Elementary and Woodbury Elementary were located and filed.

When pressed for an explanation, the Ballot Manager suggested that the memory cards were placed in the DREs as part of the recount process and left there by accident. This possible explanation fails to consider that although the precincts at Brookview Elementary were involved in the recount process, those voting at Woodbury Elementary were not. On 6/22/2006, the Board did not have a list of all missing memory cards; rather, the CCBOE only has a list of all *original* memory cards that are missing. [Interview with Ballot Department Manager; Examination of Ballot Department internal communications]

6.21 Recommendation: The CCBOE must create a process and training that will allow the poll workers to understand the exact number of memory cards that must be placed into the clear memory card bag at the end of the day and that the memory card bag should be sealed and placed in the large red bag only. The memory card bags should be marked with a large number to reflect the number of memory cards that should be in that bag before the red bag leaves the polling location. Staff checking in Election Day supplies at delivered by the Presiding Judge should check to be sure the bag contains the marked number of cards. In the case of missing cards, the Judge should be sent back to the polling place to retrieve any missing cards immediately. *See Appendix D: Election Night Proposal.*

6.22 Recommendation: The CCBOE should eliminate requirement that the poll workers accumulate the votes from each polling location on to a single “accumulator card” as soon as possible and immediately eliminate the uploading stations. By simplifying the process the CCBOE can close the voting locations faster and get the memory cards and other voted ballots to the CCBOE. This move eliminates the opportunity for memory cards to be lost or misplaced by minimizing the number of times they are handled by poll workers.

6.23 Recommendation: The CCBOE should purchase 48 DESI Election Media Processors (EMP) which may be used to feed up to six memory cards at once into the GEMS system. At peak load these devices, which are pending ITA certification by the Secretary of State for use by Boards of Election, will allow the CCBOE staff to read 288 memory cards simultaneously and will eliminate the need to accumulate memory cards at the polling location and upload the cards at the transfer stations. As an added bonus, these devices can also be used to burn memory cards in advance of an election. Eliminating the accumulation and uploading will allow the CCBOE to gain custody of the memory cards as soon as possible, minimize the number of individuals involved in the chain of custody and improve the security of the memory cards and the voted ballots.

6.24 Recommendation: The CCBOE should keep an inventory of *all* memory cards that includes information to identify the individual memory card, including the serial number of the machine, precinct, and polling location to which the CCBOE assigned it. In cases where memory cards are used in machines to which they weren't assigned, a strict inventory should be kept to track the machines into which cards were actually inserted.

6.25 Finding: "Black Binders" are the storage location of numerous polling location supplies, most notably DRE keys, voter access cards, card encoders, and supervisor cards. After the May 2nd election, the Ballot Department staff began looking through all the black binders and cataloging what was missing. At some point during this process, they all had to stop and work on something else, and the search area was cleared. By the time the department returned to finish the inventory assessment, the original count sheet had been lost and no one could tell which binders had already been searched. At this point, there is no clear record of what items are missing from the binders. Nonetheless, an Official Inventory spreadsheet has been compiled by the department, quantifying the missing items. Per that spreadsheet, the missing items include 209 Supervisor Cards, 812 Voter Access Cards, 215 Encoders, and 313 DRE Keys. The equation used to determine missing keys appears to be faulty, because all it does is subtract the number of keys assigned to a given precinct from a fixed value of two, without including any variable for number of keys actually returned. Reporting requirements require the Black Binder content to be returned within a 48 hour time period. [Interview with Ballot Department Manager 6/22/2006; examination of Official Card Inventory 05 02 2006 spreadsheet]

6.26 Recommendation: The Ballot Department should develop and implement an inventory tracking system. This system should be coordinated by one individual, preferably with prior experience in inventory control. He or she would be responsible for all transactions in or out, for pursuing anything that turns up missing, and for compliance with reporting requirements. In addition to black binder contents, he or she would also be responsible for tracking memory cards and DREs in conjunction with warehouse staff. Someone should be personally responsible for custodianship of these sensitive materials.

6.27 Recommendation: The Ballot Department should consider labeling all sensitive inventory with barcodes, including the DREs, memory cards, and other important black binder contents. This would eliminate the possibility of lost partial counts, but more importantly it would assign a fixed ID number to each individual item. Barcodes are

already used to track some items at the CCBOE, so some of the equipment and familiarity is already there. Memory cards already have barcode labels attached, but they are not used to inventory them.

Certificate #1 does not facilitate reconciling number of voters with number of ballots cast

6.28 Finding: ORC §3505.26 requires the Presiding Judges to “[c]ount the voted ballots,” and states that “[i]f the number of voted ballots exceeds the number of voters whose names appear upon the poll books, the Presiding Judge shall enter on the poll books an explanation of that discrepancy.” In other words, Ohio statute requires Presiding Judges to reconcile the number of voters and the number of ballots cast. The CCBOE’s Certificate #1, however, is not set up for the Presiding Judges to reconcile anything; instead, it only has spaces for the Presiding Judge to enter data that the CCBOE could use for the reconciliation.

The Booth Official Training Manual also does not instruct poll workers to reconcile the number of voters and the ballots cast, nor is Certificate #1 set up to perform that reconciliation. Although poll workers should have all of the necessary data to perform the reconciliation after printing out each DRE’s Long Report, Certificate #1 only includes boxes for data to perform half of the reconciliation — the number of voters who entered the polls.

Certificate #1 requires Booth Officials to certify that the “Accounting Chart of voters’ signatures and the number of ballots being delivered to the Board of Elections is true and correct for ballots cast for this Election.” Booth Officials, however, cannot make this certification without the Long Report, which shows results by precincts, and which the most recent Booth Official Manual instructs them not to print. [Certificate #1; Booth Official Training Manual]

6.29 Recommendation: Certificate #1 should be set up to allow poll workers to perform a reconciliation (*see proposed revised Certificate #1, Appendix H*). Requiring poll workers to reconcile the number of ballots cast with the number of voters would:

- Allow those closest to where any discrepancy was created to investigate and resolve the discrepancy;
- Help assure that the poll workers complete the forms because they will understand the reason that the CCBOE is accumulating the data;
- Help assure that poll workers print out each DRE’s Summary Report that will be necessary to perform the reconciliation.

Although DREs are not precinct specific, they are capable of producing reports that show results by precinct. The poll workers should print out a Long Report for each DRE. Those reports will show the polling location’s results by precinct, which the Presiding Judges could then circulate them between precincts to complete their revised Certificate #1.

6.30 Finding: Locating a specific DRE at the warehouse is time consuming and difficult due to an insufficient tracking system. The warehouse is organized into rows, like isles in a grocery store, with stacks of eight DREs each lined up parallel, from the middle isle out to each wall. All that is tracked on the location spreadsheet is what row a given DRE is in. Each row contains over a hundred DREs, and the only way to find a specific one is to crawl on hands and knees, searching serial numbers or location stickers. Compounding the situation is the fact that DREs from a given location are not kept together, and may be split among different sections of the warehouse. For example, it took three people approximately two hours to locate fourteen machines from the A.J. Rickoff polling location to do a spot audit. Two-level rolling carts from DESI are beginning to arrive in large quantities, and a transition to storing DREs on those is underway. Currently, the tracking spreadsheet only specifies what row of carts and what level, top or bottom.

6.31 Recommendation: The warehouse should track not only what row, but also what stack (or rack) all individual DREs occupy, and their specific location within that stack (or rack). Barcode labels, already on the DREs, could be used to facilitate this tracking system.

GEMS reports are inconsistent and do not always contain needed information

6.32 Finding: The CCBOE has many different versions of the same GEMS reports — i.e., some reports that are supposed to show the same data have different totals. Also, those reports do not always signify to the user what information they contain. Accordingly, the Ballot Department manager could not always explain the differences between some of those reports. [Interview of Bob Baker on 6/22/2006]

GEMS does not allow the CCBOE to export data from a report into an Excel spreadsheet, so a Ballot Department staff member had to enter that data manually. The column in the Poll Book Justification that is supposed to show the number of ballots cast per GEMS does not have a total column that the CCBOE can use to verify that the CCBOE (1) accurately copied that information; and (2) took the information from the correct report. Although someone could total the column to verify that the CCBOE accurately took the data from the other report, doing so wastes time and shows that the CCBOE might not have performed this check.

The Deputy Director said that once the CCBOE activates a provisional ballot in GEMS, no way of reconciling the number of voters to the number of ballots cast exists because GEMS considers activated provisional ballots to be no different from regular ballots.

The Director could not produce a report or calculation worksheet that supports the official total — 202,504 — on the Ballots Cast Distribution Summary.

The Ballots Cast Distribution Summary, the CCBOE-prepared report that shows the number of DRE votes, the number of provisional ballots, etc. and that the Director

submits to the board for its approval, showed the total regular DRE votes for the unofficial canvas. Although it also showed a total number of votes for the official tally, that number was a grand total that did not break out how many provisional votes, seventeen year old votes, etc., made up that grand total. In other words, it did not show whether the number of regular DRE votes, which should not change, was the same in both the official and unofficial tallies. In fact, that number had changed. The Cards Cast Report that has the same total as the unofficial canvas in the Ballot Cast Distribution Summary does not include totals for four Euclid precincts. Also, the number of ballots from at least one other polling location, Schaff Community Center in Parma, changed from the official to the unofficial canvas. Although part of that difference can be attributed to absentee and provisional ballots that the CCBOE manually entered, the entire difference could not be explained. [Interview of Ballot Department Manager Bob Baker 6/22/2006; interview with the Deputy Director on 6/8/2006; interview with the Director on 7/5/2006; walk-through with Brian Cleary on 6/22/2006]

6.33 Recommendation: Through meetings with other departments, especially the department responsible for preparing the official and unofficial reconciliations (or canvasses), the Ballot Department manager should understand those other departments' informational needs — i.e., what kind of reports they will need to perform the reconciliation. Then, the Ballot Department should prepare only one version of those reports and note on each copy what information it contains.

6.34 Recommendation: All GEMS reports should have a grand total that can be cross-referenced to other GEMS or board-produced reports. Here are some examples of the kind of reports that the CCBOE will need and might already produce:

- A report that shows each polling location's DRE results, less provisional ballots, broken out by each DRE that was at that polling location (this report should equal the number of regular DRE voters) (the CCBOE should post this report on its website so that interested parties can verify that the amounts on the Long Report posted at the polling location were the amounts that the CCBOE ultimately counted);
- A report that shows the number of ballots cast at the polls per polling location (the CCBOE can use this report to perform a quick, unofficial reconciliation on election night and to perform an official reconciliation, especially when the number of voters and the number of ballots cast do not reconcile per precinct);
- A report that shows the number of regular ballots cast at the polls per precinct before the CCBOE accepted and activated provisional ballots (this report should include all regular ballots, both DREs and optical scans, cast at the polls) (the CCBOE can reconcile the results in this report with the number of voters, according to the Poll Book and Audit Book, without having to back out the number of voters who cast optical scan ballots);

- A report that breaks out the number of regular DRE votes, seventeen-year-old ballots, curbside optical scan ballots, etc. cast at the polling location (the totals for each category on this report should equal the totals on the summary report of vote totals that the Director presents to the Board); and
- A report that shows the number of votes, both provisional and regular, cast per precinct and polling location (this report should equal the sum of the report mentioned in the third bullet point and a report that shows the accepted provisional ballots).

The CCBOE should show more detail on summary reports that it prepares to allow the Board Members and the public to determine whether numbers that should not change have changed. All numbers on any report that the CCBOE prepares should be easily traceable to supporting documents such as GEMS reports.

The Board of the CCBOE should review and approve reconciliations of voters to ballots cast

6.35 Finding: To collect data on the number of voters per precinct for the reconciliation process, the CCBOE had its employees prepare a worksheet for each precinct that showed the number of voters shown in the Audit Book and the number of signatures in the Poll Book. When preparing the Poll Book Justification spreadsheet, the CCBOE had no control in place to assure the accuracy of the data that it entered into the spreadsheet from those worksheets. Specifically, the CCBOE employees preparing the spreadsheet entered the data as the worksheets arrived. [Interview with Director Vu and Shantiel Hawkins on 7/12/2006]

6.36 Recommendation: If the CCBOE needs to enter data from employee-prepared worksheets or from the Certificate #1's, it should enter that data in batches, meaning groups of twenty or so worksheets or Certificate #1's. Once a batch is entered, the CCBOE employee should run a calculator tape totaling all of the data on the Certificate #1's or worksheets. The CCBOE employee should then compare that total to a total on the Excel spreadsheet to make sure that they match. This procedure will help assure the accuracy of the data entered onto the spreadsheet.

6.37 Finding: The Executive Assistant gave the Panel a copy of the CCBOE's Poll Book Justification. After Panel staff used that document to prepare a spreadsheet of discrepancies between the number of voters and the number of ballots cast that exceeded ten, the Executive Assistant said that the numbers on the Poll Book Justification were inaccurate as they did not include corrections that CCBOE employees had made to the spreadsheet. The Executive Assistant said that no copy of that spreadsheet with the accurate numbers existed. Although the Executive Assistant said that the Board had received a copy of that report at its May 20 certification meeting, a Republican Board Member's administrative assistant could not find a copy. Also, the Board's meeting minutes from the certification meeting neither mentioned what reports the Director had presented to the Board nor included copies of the reports that the Board had received. The

meeting transcript ambiguously refers to reports that the Board Members had received, but does not state the name of those reports. Because the CCBOE could not offer the Panel a copy of this spreadsheet that it stands behind, Panel staff could not test it. [Interviews with Shantiel Hawkins on 7/13/2006 and 7/14/2006; the Board's 5/20/2006 meeting minutes; transcript of the Board's 5/20/2006 meeting; inquiry of Linda Steimle on 7/14/2006; CCBOE-prepared Poll Book Justification]

6.38 Recommendation: The Director should present to the Board the Poll Book Justification that shows every precinct and polling location and whether or not they reconciled within a board-determined acceptable margin. The Board should review this document and accept it into the Board's minutes. The Board's clerk should include a copy of this document with the minutes on the board's website.

6.39 Finding: Although the Ballot Department performed an unofficial canvas, that reconciliation was not done on a spreadsheet which an interested party, like a Board Member, could review. Instead, a Ballot Department employee quickly compared the amounts on the Cards Cast Report with the Certificate #1's and marked on the Cards Cast Report any discrepancies that needed further investigation. The Ballot Department employee however did prepare a summary sheet of unacceptable discrepancies which he gave to his manager. The Ballot Department manager forwarded those results to the Director, the Deputy Director, and the IT Administrator, but the Director did not know that he received them or that the Ballot Department performed an unofficial canvas.

According to the Director, a discrepancy of thirty-five voters was acceptable in the unofficial count, and a discrepancy of ten voters and/or votes *per precinct* was acceptable in the official count. Although the board never endorsed an allowable discrepancy of ten per precinct, it did not reject that number in the board's certification meeting on 5/20/2006 when Director Vu discussed it.

6.40 Finding: On Monday 7/9/2006, CCBOE staff discovered fifteen uncounted absentee ballots in the bottom of a mail tub. Preceding the election, the CCBOE mailed out polling place notification cards to voters, some of which began coming back "undeliverable" approximately four days after. These cards were equipped with scannable barcodes to aid in the tracking of which voters had changed addresses, but it was soon discovered that the scanning did not work. The returned cards were then mailed to the printing vendor for scanning, and according to Candidate and Voter Services Manager DeFranco, this is when the absentee ballots were lost. They were discovered mixed in with notification cards to be sent to the vendor. As of 7/14/2006, the CCBOE has decided that ten of these ballots are not valid because their original postmark dates were too late to be counted for the May Primary. The other five ballots are still in pending status, until the CCBOE can determine their validity.

6.41 Recommendation: The CCBOE must standardize mail room procedures to include a confirmation that a mail tub is indeed empty of incoming mail before it is used for any other purpose.

6.42 Finding: The CCBOE did not have a column in its reconciliation, which it named the Poll Book Justification, for adjustments made by the executive assistant or others to help the number of voters and ballots cast reconcile. So, the CCBOE employee who prepared the spreadsheet adjusted the amount in the Audit Book or Poll Book column or both. For example, if CCBOE personnel went to the Pink Sheet and found out that a discrepancy at a location was due to five voters leaving before they voted, but after they had signed the poll book, the person preparing the reconciliation did not note that adjustment to bring the discrepancy within the board determined accepted amount.

6.43 Finding: Nothing in the transcript from the CCBOE's 5/20/2006 meeting, during which the board certified the election results, shows that the administration presented the Poll Book Justification spreadsheet to the board. This spreadsheet shows which precincts and polling locations did not reconcile and by how much. [Interview of the Director on 7/5/2006; CCBOE Meeting Transcript of 5/20/2006]

6.44 Recommendation: Once the CCBOE receives the Certificate #1's (i.e., the Reconciliation of Voters to Ballots Cast) from the polling locations, a CCBOE employee should enter the amount of voters per polling location from the Certificate #1's on a spreadsheet. After the CCBOE has uploaded all of the results into GEMS, the CCBOE should import those results by polling location into the spreadsheet and compare them with the data from the Certificate #1's. The CCBOE should investigate any unacceptable discrepancies. The Director should review, sign, and date this spreadsheet. The Director should then present this spreadsheet to the board for its review and approval.

The Board should receive an opinion from its legal counsel on whether an allowable discrepancy of ten complies with any Ohio laws, SOS directives, or official board policies. Even if no mandatory authority exists on this matter, as good practice the board should adopt an acceptable discrepancy of one or two or a board-determined percentage of the voters who voted at the precinct. The deviation that the Director suggested — ten votes per precinct — would allow for a 14,340 countywide discrepancy of votes to voters (1,434 precincts x 10 = 14,340).

After Election Day, the CCBOE should use the GEMS report that shows the number of ballots cast per precinct and the revised Certificate #1 which shows the number of voters per precinct to reconcile the number of voters and the number of ballots cast by precinct. This spreadsheet should include a column for any adjustments that the employee who prepared it had to make. The CCBOE should perform this reconciliation on a spreadsheet that the Director reviews, signs, and dates. The CCBOE should also prepare a summary spreadsheet of precincts where a discrepancy is greater than a board-determined accepted amount. The Director should present both of these spreadsheets to the board for its review and approval.

If the Board continues to have voters cast provisional ballots in the DREs, it will want to perform the following additional reconciliation procedure. After the election, the CCBOE should prepare a GEMS report that shows two totals: the number of regular ballots cast and the number of provisional ballots cast. After CVS accepts and rejects

provisional ballots, it should prepare a report that shows the number of provisional ballots accepted and rejected. Then, after the Ballot Department manually activates the accepted provisional ballots, the CCBOE should print another GEMS report that shows the number of ballots cast. The difference between that report and the number of accepted provisional ballots cast on the CVS-prepared report should equal the number of regular ballots cast. Also, the total of the rejected and accepted provisional ballots in the CVS-prepared report should equal the number of provisional ballots on the initial GEMS report. The CCBOE should be able to perform these reconciliation procedures at the county, precinct, and polling location levels.

6.45 Finding: The CCBOE inconsistently applied Director Vu's acceptable margin of error. The CCBOE used ten as the acceptable margin of error when determining whether polling locations that had precincts that did not reconcile within ten reconciled. The CCBOE, however, did not subject all polling locations to that standard. So, many polling locations that had all of their precincts reconcile within ten did not reconcile within ten. For example, Columbus Intermediate School, a Bedford Heights polling location, had four precincts each of which reconciled. The polling location, however, had a total discrepancy of twenty-five. Because none of that polling location's precincts exceeded Director Vu's margin of ten, it passed the test, and Director Vu did not present it to the Board as a problem polling location. [Interview of Shantiel Hawkins and Director Vu on 7/12/2006; Poll Book Justification; and the transcript from the Board's May 20 meeting minutes]

6.46 Recommendation: The Board must adopt an acceptable discrepancy for polling locations and precincts. The Director should present to the Board, along with the Poll Book Justification, a summary of that document that lists all precincts and polling locations that did not reconcile by a board-determined acceptable margin. The Director should include polling locations on that list regardless of whether each of their precincts were within the acceptable margin. The Board's clerk should include a copy of this document with the minutes on the board's website.

6.47 Finding: Director Vu represented to the Board that only five precincts did not reconcile by ten votes or fewer. The Panel staff's 100% test of precincts shows that 79 precincts did not reconcile by ten votes or fewer. In order to test whether this failure to reconcile was due to poll workers giving voters access cards with ballots for the wrong precincts, Panel staff looked at combined totals for precincts within each polling location that had precincts that did not reconcile, and found that fifteen did not reconcile within Director Vu's acceptable margin. The Director reported to the Board that just two polling locations did not reconcile when combined in this way.

Board Member Ed Coaxum and Director Vu had the following conversation during the Board's 5/20/2006 meeting, during which the Board certified the county's election results:

Mr. Coaxum: And but for Spring Villa Apartments and Shaker Community Building the remaining precincts were within the standard deviation, is that correct[?]

Mr. Vu: That's correct. And I think —

Mr. Coaxum: On a precinct basis, is that correct?

Mr. Vu: Yes.

Mr. Coaxum: Thank you. With respect to Shaker Community Building you have an issue with respect [to] three precincts within Shaker Community Building, and within Spring Villa you have — we have issues with respect to two precincts. So out of 1,434 precincts we have questions, not about ballots cast, but we have questions concerning five precincts, is that correct?

Mr. Vu: That's correct.

[Transcript from the Board's May 20 certification meeting]

Assuming that the standard deviation that Director Vu and Mr. Coaxum are talking about is ten, which the Director refers to later in the same meeting, the Panel's reconciliation of the votes cast and voters was greater than the standard deviation more than five times. The number of votes cast per the Cards Cast Report and the number of voters per the Certificate #1, the Audit Book, and the Poll Book, depending on which of those sources were available, vary by more than ten in the following eighty precincts (the number in parenthesis is the lowest discrepancy between the Cards Cast Report and the precinct's Certificate #1, the Audit Book, and the Poll Book; a negative number means that more ballot were cast than voters, while a positive number means that less ballots were cast than voters):

- Beachwood 00-A (78);
- Beachwood 00-L (-62);
- Beachwood 00-M (57);
- Bedford Heights 01-A (11);
- Bedford Heights 03-B (-16);
- Brecksville 00-K (45);
- Brecksville 00-O (-45);
- Broadview Heights 02-K (204);
- Broadview Heights 02-C (-207);
- Cleveland 01-Q (12);
- Cleveland 01-R (12);
- Cleveland 02-S (-11);
- Cleveland 03-P (-11);
- Cleveland 05-A (-13);
- Cleveland 05-U (-29);
- Cleveland 06-A (22);
- Cleveland 06-E (-13);
- Cleveland 06-O (39);
- Cleveland 06-R (-40);
- Cleveland 08-F (-47);
- Cleveland 08-O (42);
- Cleveland 08-Q (72);
- Cleveland 08-R (-83);
- Cleveland 09-Q (19);
- Cleveland 09-R (-25);
- Cleveland 11-C (27);
- Cleveland 11-D (-16);
- Cleveland 16-L (-24);
- Cleveland 16-N (21);
- Cleveland 19-I (-12);
- Cleveland Heights 04-K (-60);
- East Cleveland 02-D (-40);
- East Cleveland 02-H (36);
- Euclid 04-H (-14);
- Euclid 04-I (15);
- Fairview Park 03B (-73);

- Fairview Park 05C (69);
- Highland Heights 01-A (11);
- Highland Heights 01-B (11);
- Highland Heights 02-A (-14);
- Highland Heights 02-B (-42);
- Highland Heights 04-A (164);
- Lyndhurst 01-D (61);
- Lyndhurst 01-E (-68);
- Lyndhurst 03-A (-11);
- Lyndhurst 03-D (-14);
- Mayfield Heights 00-B (176);
- Mayfield Heights 00-L (-176);
- North Olmsted 03-E (54);
- North Olmsted 04-E (-11);
- North Olmsted 04-H (-22);
- Oakwood 03-B (-13);
- Olmsted Falls 01-A (-105);
- Olmsted Falls 01-B (20);
- Olmsted Falls 02-B (26);
- Olmsted Falls 03-A (78);
- Olmsted Township 00-F (22);
- Olmsted Township 00-H (-29);
- Parma 03-I (42);
- Parma 05-D (15);
- Parma 05-F (-12);
- Parma 09-D (-16);
- Pepper Pike 00-A (13);
- Pepper Pike 00-G (-14);
- Rocky River 04-A (32);
- Rocky River 04-C (34);
- Seven Hills 02-B (149);
- Seven Hills 02-C (201);
- Shaker Heights 00-E (-17);
- Shaker Heights 00-H (15);
- Shaker Heights 00-I (-111);
- Shaker Heights 00-P (74);
- Shaker Heights 00-GG (14);
- South Euclid 01-B (142);
- South Euclid 01-C (-137);
- South Euclid 02-A (-14);
- South Euclid 02-E (15);
- Westlake 01-F (89); and
- Westlake 02-D (-92).

[CERP's reconciliations of voters to ballots cast per precinct; GEMS Cards Cast Report]

Although some of the above precincts reconciled when combined with the other precincts at their polling locations, many did not. In the CCBOE's Poll Book Justification summary, which it included with the Ballots Cast Distribution Summary that it presented to the Board at the 5/20/2006 meeting, the CCBOE reported that it could not reconcile two polling locations within the standard deviation of ten. The following fourteen precincts did not reconcile within a range of ten when combined with the other precincts at their polling locations (the number in parenthesis is the lowest discrepancy between the Cards Cast Report and the Certificate #1, the Audit Book, and the Poll Book for the entire polling location; a negative number means that more ballot were cast than voters, while a positive number means that less ballots were cast than voters; the precinct's polling location is in the second parenthesis):

- Cleveland 02-S (-12) (Miles Elementary School);
- Cleveland 03-P (-13) (A.J. Rickoff);
- Cleveland 05-A (-11) (Merion Sterling Elementary School);
- Cleveland 06-A (22) (Rainbow Place);
- Cleveland 08-Q (72) (none noted);
- Cleveland 08-R (-83) (Empire Computech School);

- Highland Heights 02-A (-12) (Wellington Catering);
- Highland Heights 01-A, 01-B, 02-B (-14) (Highland Heights Community Center);
- Lyndhurst 03-A (-11) (Sherri Park Apartments);
- North Olmsted 03-E (48) (North Olmsted City Hall);
- Olmsted Falls 02-B (30) (Olmsted Community Church);
- Parma 03-A, 03-C, 03-I (141) (Schaaf Community Center);
- Seven Hills 02-B, 02-C (342) (St. Peter United Church of Christ); and
- Shaker Heights 00-GG, 00-I, 00-P (-20) (Shaker Community Building).

[CERP's reconciliations of voters to ballots cast per polling location; GEMS Cards Cast Report]

6.48 Finding: The number of voters and ballots cast reconciled in 65 precincts that did not reconcile by themselves, after Panel staff reconciled the number of voters and ballots cast in those precincts' polling locations. Also, the following eight precincts had a total number of ballots cast that exceeded the number of the precinct's registered voters (the number in parenthesis is the percent of registered voters that cast ballots in the precinct):

- Beachwood 00-L (1119.85%);
- Cleveland 05-E (1650%);
- Cleveland 06-E (700%);
- Cleveland 13-V (107.9%);
- Cleveland 13-Y (200%);
- Cleveland 14-D (900%);
- East Cleveland 02-D (111.59%); and
- South Euclid 01-C (109.03%).

One possible explanation for these problems is that poll workers shared access-card encoders without realizing that the encoders were precinct specific. Doing so threw off the reconciliation and resulted in many voters not receiving the correct ballot for their precincts [The Panel's reconciliations of voters to ballots cast per precinct and per polling location; GEMS Cards Cast Report]

6.49 Recommendation: The CCBOE must train Booth Officials to understand that encoders are precinct-specific. A long-term solution would be having the poll workers enter a number off of a pre-numbered card to encode the ballot. More specifically, the poll worker filling out the Audit Book would hand a voter a numbered card off a packet with a Card A and Card B. Card B would bear the same number as Card A and would remain with the packet, after the poll worker tore off Card A. After receiving Card A, the voter would hand it to the poll worker encoding access cards, and that poll worker would enter the number on the Card into the encoder to encode the voter's access card. Because the numbers would be precinct specific, by entering the number on the card, the poll worker would be encoding the access card with that precinct's ballot. The numbers on the Cards would only be able to create one ballot — i.e., they could not be reused. This process would not only make sure that voters receive the correct ballot, but also help

prevent someone who entered the access-card-encoding line without signing in from voting. Furthermore, this process would help Presiding Judges count the number voters and, thus, facilitate their reconciliation of voters to ballots cast. So, after the polls close, the Presiding Judges could use the packet to determine the number of voters by subtracting the lowest numbered Card B from the number on the lowest remaining Card A.

6.50 Finding: A number of poll workers started listing all voters, regardless of party, in the Audit Book's Democrats section — the first section in the Audit Book. Once they realized their mistake, the poll workers crossed out the Republican and Issue voters and wrote them in the correct section. This made counting the number of voters in the Democrat section harder and increased the chance for miscounting. Also, having three categories requires the poll workers to perform another step when performing the reconciliation: adding the Republicans, Democrats, and Issues, instead of just placing one total for the number of voters on the reconciliation.

6.51 Recommendation: The CCBOE should eliminate the Republican, Issues, and Democratic distinctions in the Audit Books. The poll workers should just list all voters, regardless of party, in the Audit Book in the order in which they arrive. If the CCBOE still want to track the number of Republican, Democratic, and Issues voters, it should have the poll workers note that in a space next to each voter's name.

6.52 Finding: Deputy Director Dillingham indicated that the Voter Verified Paper Audit Trail (VVPAT) was the only true "official ballot" produced by the system. Ballot Department Manager Baker indicated that some VVPAT printouts from May 2nd were unusable because the paper did not advance and multiple ballots were printed on top of each other. These two statements together indicate that official ballots were inadvertently destroyed as they were being created on election night. Many voters did not look at the VVPAT printout, and this allowed long strings of unreadable ballots to print because no one was aware of the paper jam. Numerous complaints that printers failed regularly were also cited in Public Hearings, Incident Reports, EDT logs, telephone surveys, and comments by telephone to the Cuyahoga Election Review Panel.

The CERP staff conducted a test of the DESI voting machine using high school seniors. One of the troubling observations was that when the paper jammed in the printer, the person's vote was rendered unreadable. Furthermore, the person who voted next in line got the report of the paper jam after the previous voter had walked away.

The Ballot Department Manager Bob Baker said that these compromised paper records were recreated from the DRE flash drive and/or card memory. However, voters did not have the opportunity to confirm that these printouts were valid representations of their choices, an apparent violation of Ohio law ORC §3506.10. [Interviews with Deputy Director Dillingham and Interviews with Ballot Department Manager Bob Baker 6/20/2006, 6/22/2006, 6/23/2006; Telephone surveys; Incident Reports; Testing performed by Daniel Thiel and Gabrielle Kelly on 06/26/2006; Interview with Manager Dane Thomas 6/27/2006]

6.53 Recommendation: The CCBOE should, in writing, settle the question of what record or combination of records constitutes an official ballot in this system. If an official ballot is defined as a paper tape, additional training and procedures will be needed to ensure that official ballots are not destroyed by printer malfunctions. Each voter must be made aware of the VVPAT, its purpose, and its importance and some mechanism must exist to confirm that it is printing a useable record. Whether or not the VVPAT is the best way to ensure accuracy, it becomes useless when it is allowed to malfunction repeatedly during an election.

6.54 Recommendation: The CCBOE should examine the printer failure as a possible breach of contract by DESI.

6.55 Finding: During the May 2006 Primary Election, the CCBOE decided not to count seven absentee ballots because their secrecy envelopes were filled out in pencil rather than in ink. Pat Wolfe of the Secretary of State's office subsequently advised the CCBOE that "R.C. 3509.05 requires the person to sign the envelope, but it does not state it must be signed in ink unlike R.C. 3501.38(B) which requires signatures to be affixed in ink on petitions." [Email communications from the CCBOE and Pat Wolfe of the Secretary of State's office]

6.56 Recommendation: The CCBOE should amend their policies and procedures to accept absentee ballots as long as the secrecy envelope is completed and signed and the absentee meets all other requirements as stated in ORC §3509.

Chapter VII: Management and Personnel

Management & Administrative Issues

Background

The CCBOE originally hired Michael Vu to serve as Director of the CCBOE in August 2003 and reappointed him by unanimous vote in March 2006. The CCBOE Board specifically sought a Director who would professionalize the CCBOE and upgrade its performance and staff. They expected a sound, strategic downsizing and reorganization to achieve professional norms of performance. The Board recognized patronage had often been the basis of CCBOE hiring decisions, not just in the temporary employee ranks but also for permanent managerial and staff positions. The Board also recognized the deficits of patronage hiring in the increasingly complex requirements for election administration. Board Members expected and desired that the agency would move toward a having a permanent staff with appropriate professional credentials, skills and experience.

Mr. Vu was hired after a national search, relocating from Salt Lake City, Utah. He was 28 when he arrived, and had technical training as a GIS specialist (a type of demographics database). As the elections manager in Salt Lake County, his office was a part of the County Clerk. Salt Lake did not use e-voting technologies, and no significant technical transitions occurred while he managed the office. Mr. Vu lacked experience with e-voting but was fascinated by its possibilities. [Director Vu interviews and resume]

Early in Director Vu's tenure, Deputy Director Powell retired and Gwen Dillingham moved from Elections Coordinator to Deputy Director. Ms. Dillingham had served in this capacity previously, in the 1990s.

By State statutory law, the Board Chairman's political party affiliation must differ from the Director's. In Cuyahoga, Chairman Bob Bennett is a Republican so the Director affiliated locally as a Democrat. The Deputy Director is selected from the same political party as the Chairman.

Early in Director Vu's tenure, the Director announced that he would initiate a bifurcated, two-stage reorganization of the agency. The initial reorganization was designed to address "the Fourth Floor" — the administrative offices within the CCBOE that included the Director/Deputy Director, the Procurement, Human Resources, Board Member support, and media support offices. The second reorganization, planned for 2005, was to reorganize the "election side" — the offices that undertook all the responsibilities for holding an election and tabulating the results, including the departments and divisions concerned with: candidate and issue petitions, voter registration, ballot preparation and proofing, absentee ballot applications and processing, provisional ballot validation, voting devices and voting locations preparation, poll worker recruitment and training, Election Day management, tabulation of election results, and the numerous other tasks involved in conducting elections.

Director Vu, Deputy Director Dillingham, and Administrative Services Administrator Platten and Elections Administrator Maiden (often still referred to as the “Elections Coordinator”) are charged with the exercise of top managerial powers within the agency. The Fiscal Services officer directly reports to the Director, as does the Information Services and Ballot Division Administrator, who has been with the CCBOE a little over 4 months. Under the Administrators are arrayed a variety of departments charged with different election tasks or administrative services.

Management decisions and directives that have impaired the CCBOE’s elections performance

Executive managers not conveying important information to the Board

7.1 Finding: The Director and the Deputy Director have, from time to time, troublesomely omitted notifying the CCBOE of classified information concerning major problems of vital interest during the Board’s public meetings. In some cases, it is clear that the Director and Deputy Director had first hand knowledge of the problems because they attempted to manage those problems. In other cases, managers say they either related the information to Director and Deputy orally, and/or also wrote it in email messages and departmental reports. Some examples include:

- *Optical Scanning Defects:* For a week before May 2nd election, the central count optical scanning devices were not testing accurately. But the Director and Deputy Director omitted reporting this failure to the Board in the last two meetings before the May 2nd election (on May 1st and April 27th). The Director withheld the information about these failures until the early morning hours 2:00-5:00am of May 2nd Election Day. [Interview with Director Vu; with Board Members; Board transcripts.] On May 8th, the Board queried the Director about why the “devices” and “ballots” tests had not occurred and been completed earlier. Director Vu responded that “[t]hey were tested throughout the election in preparation of this election.” (Board Transcript 5/8/2006)
- *Zone Transmission Staffing and Performance:* Transmission (including at the DRE level) was still failing in various ways on the weekend and day before the May election. Despite the Board having requested that the zone electronic transmission plan not be put into action unless it was fully operational, the Director went forward with the zone plan instead of going to a contingency plan. This decision created a cascade of additional problems on election night. Director Vu did not relate accurately the continued transmission problems to the Board at the meeting on Monday, May 1. [Board Transcript 5/1/2006; Board Member Interviews]
- *DIMS Problems Affecting Absentee Voting Rights:* The Director and Deputy did not report to the Board the DIMS problems that began shortly after installation of the system (Fall 2004, before the presidential election). Registration, Booth and Ballot Department managers report that Deputy Director Dillingham and the HR

Administrator described DIMSnet problems as simply “training problems” attributable to staff members’ data entry errors. [see Dane Thomas report; Interviews with CVS managers] But no high level internal investigation was ordered to ascertain whether their assertion was accurate, and the Director and Deputy did not report the problems to the Board and the public. [Board interviews; Director Vu interview] Some of these problems were quite serious for voters’ rights. For instance, in the November 2004 presidential election that occurred shortly after the DIMSnet system was installed, DIMSnet reports confirmed that it had generated absentee ballot labels for thousands of voters as the CCBOE personnel had commanded. But thousands of voters never received their absentee ballots. Upon departmental investigation, managers discovered that the orders for these voters’ ballots were stuck almost invisibly inside the DIMSnet database and, despite DIMSnet’s reporting their completion, they were not completed and seemed to be in a “phantom” hold. Moreover, the DIMSnet system did not provide an archive or any way to track or replace these ballot orders which were lost in the system. The Director and Deputy did not and have not reported the problem to the Board or to the public in any public meeting, nor other DIMSnet issues including statistical tabulation errors in provisional ballot validation/rejection. [Interviews with CVS Department Manager; Administrator Maiden]

- *DIMS Problems Affecting Voter Registration:* The Director and Deputy have not reported to the Board in a public meeting departmental-documented unexplained loss of voter registrations from DIMS. Additionally, despite the frequent testimony about these issues to the Board from the Greater Cleveland Voter Coalition and other watchdog groups since 2004, Director Vu has not reported on the departments’ experience and frustrations with DIMS. The department manager expressed his frustration that until the Board Chairman directed the Director to place on the Board Meeting Agenda in June 2006 the DIMS data loss of payroll entries for temporary election workers, the Director and Deputy did not discuss DIMS data loss problems at Board meetings. [Interviews with CVS managers and Board Members; Board transcript]
- *DIMS and GEMS Compatibility Issues:* Soon after GEMS was installed, Ballot Department workers and IS Department staff experienced and started documenting the incompatibility of DIMS and GEMS despite DESI having marketed these systems as a “seamlessly integrated” election management information system. Although the “domino effect”— a broad range of delays and problems cascading down to all election departments — generated by the database incompatibility problems could easily have been foreseen even though not easily solved, the Director and Deputy chose not to mention these problems to the Board at any public meeting from February through May 2006. [Interviews with Board Members and with Managers; Board Transcripts]

- *Problems with GEMS Software:* Although major problems with the GEMS information system (which governs, e.g., ballot creation, burning of memory cards, uploading of election results from memory cards and optical ballot scanners, creation of reports with election results) were occurring by February 2006, the Director and Deputy did not bring these problems to the Board's attention in any public meeting (such as the limitation of the one keyboard/server) or the grave implications for the election management schedule that depended upon the Ballot Department's meeting its schedule. It appears that Director Vu had knowledge of these problems because, in the words of Administrator Platten, he "took over" the Ballot Department from December through February, and continued to exercise close supervision over it through May. [Interview with Administrator Platten; Director Vu written statement, July 2006]
- *Inconsistent GEMS Reports:* Managers who work with GEMS advise that when they requested an absentee ballot report from GEMS in Spring of 2006, the resulting report differed each of the four times they requested it. The inconsistent reports have not been an issue that Executive managers have placed on the Board agenda. [Interviews in the IT/Ballot Division/CVS Department; Board transcripts]
- *Excessive Work Demands Placed on Staff:* The Director and Deputy did not report to the Board the excessive work demands imposed on staff (daily 12 hour shifts for 7-10 days for Logic and Accuracy (L&A) testing of DREs), plus other overtime, until Board Members expressed concern. Nor did they mention fatigue owing to the GEMS problems, the rewriting of the Poll worker manuals and the L&A test delays they had unexpectedly encountered. These were paramount issues for CCBOE staff at all levels. [Board Members interviews; Board transcripts]
- *Completion of Logic and Accuracy (L&A) Tests for the DRE Machines:* A Board Member visited the warehouse to view the testing operations and asked the Director when the testing would be finished. The concern was that the testing would not be completed in time for the voting machines' delivery to the polling places. While they were both at the warehouse with CCBOE staff present and listening, Director Vu is reported to have answered, saying that "by the end of the week" (Friday) the testing would be "complete." But at the time the conversation occurred, less than 20% of the DREs had been tested. Thousands of these DRE units still remained in their original shipping wrapping. Because the initial 20% had consumed almost one full week of L&A testing, the remaining 80% could not have been tested in the remaining 4 days. A different Board Member followed up by visiting the warehouse on Friday at 5pm to check on the completion of the L&A testing, and discovered that the testing was not nearly complete. [Board Members interviews; warehouse staff interviews]
- *Legal Standards for the Hand Count of Optical Scan Ballots:* At the 5/8/2006 Board meeting, Director Vu offered a few general points concerning the standards

governing the hand count for the “unofficial” initial count and for the later “official count.” The Director stated the CCBOE

“will begin reviewing all information and map out our intentions in conducting the official count and... the Secretary of State has requested of the Board as to what our plan is for the official count. [Transcript at p.72]. During this process of manual counting, we have already beg[un] discussion with Thad Hall, professor of the University of Utah, who is the principal [investigator] of the [U.S.] Election Assistance Commission who has been commissioned on analyzing the proper procedure for manually counting of the ballots.... We will mirror the [new Ohio HB 3 standards] as well as have Professor Hall involved in that process. He has on a national level been a professor that has discussed elections and best practices....[p.73].”

- The Director’s presentation intimates that the CCBOE will be seeking to follow national best practices that accord with Ohio law, and that a policy will be map[ped] out” and supplied to the SOS. Yet no written CCBOE policy and procedure guide was issued to govern the hand count — the “ballot remake” was the subject of a letter and policy statement to the SOS, but the managers who supervised the “ballot remake” stated that no written instructions were provided to them or to the workers. Many of the hand count practices that the Director and Deputy issued to govern the hand count and ballot remake depart markedly from the Hall set of recommendations. We continue to have questions concerning whether the Director promptly requested CCBOE legal counsel to supply legal guidance. The Director left the impression with the Board that he would be seeking to follow the professional advice offered on national best practices, but the procedures were deficient in numerous respects. [Interviews with department managers; Director Vu; Board Members].

7.2 Recommendation: The Board and its Director must create a method for communicating each week through the preparation of a weekly report. The current format does not suffice. Managers should collaborate on creation of a standardized weekly report detailing any problems in their departments and any significant milestones that will need to be met in the coming weeks. These reports should include technology issues, such as DIMS problems. The Director should forward these reports in their entirety along with his own detailing the highlights of the manager reports and the course of action that will be taken to remedy any problems identified by the managers. All reports generated should be considered public records and a portion of the monthly CCBOE meeting should include a discussion of the items contained in weekly reports for the previous month.

7.3 Recommendation: During an election cycle, the weekly reports for both the manager and the Director should include a two page progress report on achieving the milestones necessary to successfully conduct an election. These reports should be based on an election plan created by the Director and approved in advance by the Board. The reports should highlight deviations from the schedule, areas of concern for the coming

election, plans for addressing these concerns and any contingency plans that need to be in place to ensure a successful election. As a guide, the CCBOE should consider the format used by Joe Nista to report progress with GEMS implementation.

7.4 Recommendation: The Board and the Director must clearly and publicly declare their respective roles in the administration of the CCBOE. These statements should be reduced to clearly defined policies, approved by the Board, detailing the respective roles of the Board and Director in the areas of personnel, procurement and election management.

7.5 Recommendation: The Board and the Director should create an avenue for CCBOE staff with concerns about the overall administration of the agency to raise issues and concerns through a confidential channel so that their concerns can be aired directly to the Board without fear of recriminations. A new independent office lateral to the Board should be created called the Ombudsperson's Office (hereinafter "Ombuds Office"). One duty shall be to track all Board directions to any member of management and to provide updates to both the Board and management on their completion.

Management directions to CCBOE employees concerning communications with Board Members

7.6 Finding: Occasionally, including twice in May-June 2006, the Director has specifically directed CCBOE managers that they should not relate certain information/problems to Board Members, advising that "the Board doesn't need to know that" or chastising them for relating information that revealed a performance problem that might reflect poorly on top management. One such issue concerned difficulties in reconciling certain precincts' number of voters with the number of ballots cast, and the other telephone complaints from election workers who had not been paid owing to unreported and unexplained DIMS data losses [Interviews with managers and staff].

Some managers report that they have been barred from communicating with Board Members via email messaging. Although the Director reports there is no foundation to this charge, some department managers specifically mentioned this policy to us as a matter of concern [Interviews with managers and Director].

7.7 Recommendation: The Board and the Director should create an avenue for CCBOE staff, with concerns about the overall administration of the agency, to raise issues and concerns through a confidential channel that will allow their concerns to reach the Board without fear of recriminations. A new independent office lateral to the Board should be created called the Ombud's Office [see below].

7.8 Recommendation: CCBOE employees should answer questions concerning their work and any aspect of the CCBOE's activities truthfully and completely whenever a Board Member inquires. Further, if it comes to the attention of a CCBOE employee at any level that inaccurate or misleading information has been transmitted to the Board and/or public, any employee with different or more complete information should send

that information to a new Ombudsperson's Office. This policy should be recorded in the CCBOE employee personnel policy manual.

7.9 Recommendation: The CCBOE Board should perform an annual performance evaluation of the Director and Deputy Director prior to reappointment and at the mid-point of their term. In advance of these evaluations the Board shall ask the Director and Deputy Director for a self evaluation and ask the staff to perform a confidential "upward evaluation" of the Director and Deputy Director.

7.10 Recommendation: In order to resolve the on-going concerns about communications with staff, the Director should provide a quarterly memorandum to staff reflecting on the past quarter and forward to the next. In addition he should answer in writing any questions submitted, with or without attribution, by staff. A copy of the memorandum should also be shared with the Board and be held open as a public record.

Executives' requests to discuss the Board's concerns with its management team only in Executive Session

7.11 Finding: The Deputy Director has requested that the Board not discuss their displeasure with managerial performance or otherwise "embarrass" the top managers in the Public Session of Board Meetings. The Board's practice of generally abiding by this request may be not only a violation of the Ohio Sunshine laws (an opinion on which should be requested from their legal counsel) but also impairs its ability to hold CCBOE top management accountable and responsive. By avoiding public discussions of managerial priorities and leadership within the CCBOE, the Board also loses one of the biggest "sticks" it has for compelling managers' responsiveness to their directions short of threatening a formal personnel action [Interviews with Director and Deputy; Board Members].

7.12 Recommendation: The Board should strictly adhere to the Sunshine laws and not enter Executive Session unless and only for the express purposes listed in the statutes and case law. The Board should seek legal guidance on interpreting and applying these statutes, but in ambiguous situations we urge erring on the side of full public disclosure. Especially now, when public trust and confidence must be rebuilt in the Board and the CCBOE's performance, every lawful step toward public accountability and fullest disclosure should be taken. By our lights, for instance, "personnel actions" do not include discussions of proposals for administrative restructuring of the CCBOE. Additionally, it seems that the June 2006 Board discussion with top managers concerning their management decisions and omissions in preparing for the May 2nd election should have been conducted in public, on the record. The Board should instruct its legal counsel to be present at all Executive Sessions and scrupulously instruct the Board when it ventures off into matters that are properly, or arguably are, part of the Public Record.

Problems resulting from reorganization of Election Administration Division

7.13 Finding: Within a few months after Director Vu's arrival (in 2003), the Director presented for Board action the first reorganization — of the 4th floor. The Board approved the proposal. It resulted in the discharge of five staff members per the recommendation of the new Director (and former Deputy Director Powell). Elements of this first reorganization included re-classification of some line staff positions (i.e., demotions of the work and persons in the positions) and the reduction of their compensation. [Interviews with Administrator Platten and managers]

Before this first “administrative reorganization,” and repeatedly thereafter, Director Vu stated that he was dedicated to downsizing the agency's staff significantly. He volunteered that he believed the agency could be more effective with a staff totaling 50-60 employees at a time when approximately 110¹⁴ were then employed. Director Vu offered these assessments before learning the practical complexities of conducting Cuyahoga elections (e.g., the frequency of elections, the 59 separate municipalities, Ohio's candidate rotation rules; Ohio's conferral on public officials broad powers for intra-municipality and intra-county redistricting), and before actually managing a major election in Cuyahoga. [Interviews with managers]

Primarily conceived and co-authored by Director Vu, Administrator (over Human Resources) Platten and Deputy Director Dillingham, (and with a lesser role played by Administrator Maiden), Executive Managers' proposal for the “second reorganization” — of the election management side — was finalized in June 2005. The executive management sent their proposal to the Board for immediate action. It did not receive the Board's sustained consideration and eventual action until November-December 2005, with the final reorganization plan becoming effective in December 2005.

Managers (primarily in departments) said executive management did not consult them in any meaningful manner, and that executives had manifested no sincere interest in department managers' comment on the proposed restructuring plan. The middle managers viewed this to be a “done-deal.” [Interviews with managers] Administrator Platten and Deputy Director Dillingham confirmed that manager's involvement was not sought or perceived necessary. [Interviews with Director Vu, Deputy Director Dillingham, and Administrator Platten]

As approved in December 2005, this second restructuring merged some departments and refashioned reporting structures for the election management side of the agency. The ultimately approved plan reduced the overall number of managerial positions, eliminated certain job titles (e.g., “Senior Clerk”) and effectively demoted these individuals to lower-classified positions such as “technician” or “specialist.” The concept behind the Phase 2 reorganization was for employees to have “more global knowledge and cross-training.” Executive managers viewed the former job titles as impeding workflow and

¹⁴ Orally in an interview Director Vu said 100 CCBOE staff members were employed when he first arrived, plus ten more full-time temps.

coordination. The Human Resources Administrator did not perceive the value of specialized expertise as at odds with cross-training. The prime managerial commitments shared between Director Vu and Platten were organizational restructuring and downsizing of the agency. [Interviews with Director, Deputy Director, Administrator Platten, and managers]

The Board met in many Executive Sessions to discuss and revise the election management reorganization. Board Members also heard many concerns from CCBOE staff and managers about the proposal and the jobs available to be filled. The Board eventually determined that no one would lose their job in the reorganization, and that they would “find a place for everyone” at least as a probationary employee. Thus, the Board did not accept the recommendations for eliminating staff positions, or for discharging some current employees. It also declined to reduce the pay of any employee, even if the positions’ titles were downgraded. The Board disagreed about the degree and wisdom of downsizing immediately before the new e-voting system was launched. As a compromise, the Board placed all the reorganized employees on probationary status for six months, with reviews expected to determine whether they remained in their positions and at what compensation (increased or reduced). Low employee morale also played a role in the Board’s effort to find a place for all staff. [Interviews with Board Members; with Deputy Director and Administrator Platten]

The ultimately approved reorganized management structure and the assignment of middle managers did not primarily and exclusively focus on how to achieve the highest quality election performance with regard to ensuring the accuracy of election results, valid voters casting valid ballots, and other objectives integral to election performance. The plan did not consider as a primary contention, backed up by empirical assessments, what amount of work was reasonable to expect of salaried managers. It did not appear to take into account the facts of the election cycle, when managers must be present for certain tasks that consume many hours, and where untoward events (such as technological failures) can require extremely long hours.

Executive management dissented from the Board’s policy and restructuring decisions, including their decision to create three assistant manager positions for the new CVS mega-department instead of only one. They also were concerned that the Board waited so long to act and involved itself in revising details of the proposal instead of simply approving management’s recommendation. The Board seemed motivated by their perception that the CCBOE needed experienced personnel to assist the CCBOE through the May 2006 election and in the transition to e-voting. By contrast, top managers had long represented within the CCBOE and externally that e-voting would require many fewer staff members. The Board, however, chose not to take this risk immediately before the e-voting transition. [Interviews with Board Members, managers, Director, Deputy Director, and Administrator Platten]

The December 2005 restructuring of departments and administrative divisions, and reassignment of managers, was deeply flawed — in conception, in timing, and in execution. This reorganization constituted a significant causative factor for the problems

experienced on May 2nd. [Staff interviews, direct reports from early voters and independent observation]

7.14 Recommendation: Strategic restaffing of the CCBOE needs to occur with careful consideration of what positions (both managerial and staff) are needed in light of the technology that the CCBOE chooses to use.

7.15 Recommendation: The CCBOE should hire a consultant to independently evaluate the organizational structure and systems to determine if it is the best model to efficiently and effectively administer the election process in Cuyahoga County. It should also evaluate the decision to move the ballot preparation and ballot count functions out of the control of the Election Coordinator and into an Information Technology Department populated with very qualified IT professionals with little or no election experience.

7.16 Recommendation: The CCBOE should either supplement or replace some of the current staff by allowing the administration to hire skilled staff by selecting the best qualified individuals vetted through an open recruitment process. Partisan balance, which is required under Ohio election law, should not be confused with partisan patronage by the Board in hiring at the CCBOE.

7.17 Recommendation: The CCBOE should reconsider the merger of the old warehouse and the Voting Inspectors into the Election Support Department. The current configuration does not allow the CCBOE to verify telephone connections and allow for a speedy resolution of last minute issues that always arise concerning polling locations. The functions of the Voting Inspectors is more akin to the functions performed by the Booth Officials Department rather than those functions that support the preparation and delivery of voting devices.

7.18 Recommendation: The CCBOE should return the responsibility for Campaign Finance reporting and auditing to the Fiscal Department. The Fiscal Department is staffed by skilled and professional financial staff that is very capable of reviewing the finance reports and helping the candidates and their campaigns resolve any discrepancy. Where appropriate, the Fiscal staff is capable of preparing an effective referral to the Ohio Elections Commission.

7.19 Recommendation: The CCBOE Board should reevaluate, perhaps as a part of the consultant study, the structure (including management positions) of the CVS Department. While the CCBOE should respect the concerns for partisan balance, it should not come at the expense of having the best available person fill positions. The study should consider how to ensure sufficient managerial supervision of temporary employees during periods of expansion.

Ineffective deployment of managers

7.20 Finding: The CCBOE deployed its managers and managerial time during the election preparation cycle for May 2nd in a counterproductive and inefficient manner. For

example, instead of having a skilled IS staffer work on the GEMS server engage in copy editing (correcting punctuation, case and spacing errors caused by faulty DESI database interfacing), a good deal of this work was performed by the newly hired Ballot Department Manager, who had a broad range of crucial managerial responsibilities. But this is hardly the most troubling example of wasted managerial time. The list includes:

- Sending managers to L & A testing for the better part of ten days, for 12-hour shifts.
- Dispatching managers (more than half of managerial personnel) to the zone transmission centers for uploading memory cards on election night.
- Assigning managers away from their own departments to other locations and departments on Election Day despite their home departments being short-staffed with an important Election Day role.
- Assigning managers to be supply bag carriers when insufficient staffing was present in the parking lot.
- Serving as an R or D to ride in cabs with memory cards and voted ballots being transported from the polls.
- Staffing pink room tables receiving and processing supply bags instead of the normal temporary staff who are hired.
- Requiring all CCBOE employees — even managers in other departments — to attend poll worker training classes.
- Requiring a manager to create an Excel data entry form for poll worker training evaluations and assigning him to key in all the data on nearly 6000 poll workers being trained.
- Failing to provide sufficient logistical staffing for delivery of training supplies for poll worker training sites, so permitting this duty to devolve upon the Booth Officials Department Manager to deliver supplies and replacement DREs to these sites.
- Compelling multiple 12-hour meetings of large numbers of key managers to read, revise and rewrite the poll worker and EDT training manuals *as a drafting committee* in the midst of the election preparation cycle.
- Assigning Implementation Teams to perform redundant responsibilities (such as researching procurement needs for the transition to e-voting) without an integrated approach or leadership. The main Implementation Team met weekly for long hours (Director Vu, Deputy Director Dillingham, Administrator Platten, Shantiel Hawkins, Mike DeFranco, Dane Thomas, Betty Edwards, Brent Lawler,

Brian Kaluscek, Joe Dennis, Administrator Maiden, Joe Nista, Brendan Gorman), which for some departments meant their entire leadership was absent for extended periods; these Team meetings were scheduled sometimes for as often as with 2-3 times a week, with ambiguous agendas, no ownership, no direction and few concrete results other than wasted managerial time totaling approximately 4 hours a week.

- Requiring managers to be present as trainers and supervisors of temp workers for the hand counts, ballot remakes, and recounts.
- Assigning the Assistant Manager in charge of Voter Registration to conduct a series of telephone surveys using her Registration staff to check on the poll worker training success rate — which was the busiest time in Registration;
- Sending staff candidates to interview with managers and then scuttling the import when the Board decided to hire on the basis of patronage.

7.21 Recommendation: The CCBOE must make far better use of their management staff. Due to staff shortages, poor planning, poor training and delays during the election implementation phase, management staff was forced to perform basic tasks which took them away from the effective execution of the election plan.

Director's bar of CCBOE staff obtaining legal compliance information

7.22 Finding: The Director specified that all employee requests for legal compliance information must travel up the chain of command. Employees are barred from asking the CCBOE's legal counsel any questions. This would be an acceptable approach if some other mechanism were established by which employees who are worried that their supervisors have directed them to break the law could obtain information so that they are not personally placed in jeopardy. (See Director's Memo dated 9/15/2004)

7.23 Recommendation: At least as a transitional measure and perhaps permanently, the Board should create an Ombudsperson Office in the CCBOE so that both employee and public concerns can be investigated and rectified in a prompt, complete, and where appropriate, confidential manner. This county officer should be empowered to request the requested consultation and direction from the County Prosecutor, the Secretary of State, or Attorney General, yet protect the employee's identity. If a permanent Ombudsperson Office is not made available in the CCBOE, the BOCC should clarify that the County's Ombudsperson Office is available on a confidential basis to employees who are concerned about legal compliance issues.

Executives' failures to complete Board-directed activities

7.24 Finding: In its Public Meetings, the Board issued directions to the executive managers, and have often specified an exact time for them to report back. The Director and Deputy have not put into place any mechanism for collecting these explicit Board

directions and concerns and have not, at least some of the time, reported back to the Board and public at the time specified. Some examples include: (a) to investigate why the Garden Valley polling place (which Congresswoman Jones, by court order, arranged to keep open extra hours at night because it opened for voting after 12 noon), had opened late and to interview all the Election Day workers who staffed the polling location; and (b) for Director Vu to correct record concerning the erroneous affidavit that Deputy Director Dillingham had given in a New Jersey litigation where she discussed Cuyahoga provisional ballot procedures. Public watchdog groups have testified, including on the missing voter registrations and some administrative performance issues, with the Board Chair responding by requesting Director Vu to investigate and report back to the Board. The Panel could not find any evidence that the Director or Deputy ever reported back to the Board on any of these matters in a public meeting. [Board transcripts; Board interviews; interviews with Garden Valley poll workers]

7.25 Recommendation: The Board must create a mechanism to track questions from the Board Members at a public meeting. Part of the mechanism must include the rule that the Clerk to the Board will place these items on the next Board agenda automatically, without any further direction needed. The answers to questions posed by the Board at a public meeting should be answered in a public meeting and reduced to writing as an attachment to the minutes of the prior meeting.

Interactions with CCBOE employees and others

7.26 Finding: Panel interviews of employees at all levels revealed an “us versus them” executive managerial style. The Director and Deputy and their management team have been repeatedly identified as “arrogant” and lacking basic “people skills” requisite for dealing effectively with employees of widely varying backgrounds. Operationally, this style has led to the perception of administrative condescension when they speak with departmental managers, other staff, and even Board Members and the general public. The attitude that has been criticized is consistent with the position expressed by the Director, Deputy and Administrator Platten that discussions with departmental managers to consider issues even as vital as election side departmental reorganization wasn’t necessary or desired; they already knew and had taken account of any points that managers might have expressed. [Interviews with managers, executive managers, and line staff; Public Hearings]

7.27 Recommendation: While top managers must manage their time well, they must also take the time to demonstrate sincere interest in hearing from other staff. They must take care to listen to others’ concerns in a respectful manner. These managerial attitudes and styles keep essential lines of communication open. Without these orientations and attitudes, managers cannot function effectively and critical information will not be shared with them for they have already severed lines of communication.

Poor timing and unrealistic expectations for launching new technologies:

7.28 Finding: The CCBOE's historic record for implementation of new technologies has been at best problematic. These tasks have been approached in an overly optimistic manner with insufficient planning, time, staff or training to insure a successful roll-out. Examples include:

(a) The Director and Deputy chose to adopt two new e-voting technologies (one for the polling places and a different system for mailed absentee ballots) in a decision making process that failed to take into account the urgency of launching e-voting in an election prior to the May 2nd primary. Choosing to schedule initial use of two e-voting systems in a county as jurisdictionally complex as Cuyahoga with only six months of sustained preparation time during the single most complex election in the entire 4-year cycle — the even-year May primary — was not wise. This primary always requires the CCBOE to create 3 ballots for most precincts (1434 Democratic, Republican, and issues-only), plus a multitude of other special ballots. The even-year primary also requires the processing of petitions for 3-5 times more candidates than any other election — a process which involves checking the voter registration records of every signatory to a petition.

(b) After the Ohio state law had been amended to require paper trails and the SOS had responsively excised DREs from the menu of approved e-technology options, the Director did not study the optical scan options with an open mind and desire to move forward expeditiously. He persisted in pushing for SOS certification of DREs with paper trails. This approval eventually issued in April 2005. Without undertaking an independent comparative fiscal and performance/staffing/maintenance analyses of the SOS-approved options available at the time, the Director decided that the DESI DREs would be the primary technology employed at the polling places. [Interviews with Director Vu; with County Commissioners; County fiscal correspondence]

(c) CCBOE executives gravely underestimated the staffing required for the e-voting transition, and the degree of complexity and difficulties that would be introduced into the CCBOE by adopting two new systems (optical scanning and DRE touch-screens) for virtually simultaneous launch [Interviews with Board Members, Administrator Maiden; managers; staff overtime records]

(d) The Director and Deputy refused to permit DESI to supply certain prepaid services to the CCBOE to prepare for the May 2nd election that were included as part of the Master Contract the SOS negotiated. The Director and Deputy were adamant that DESI teach CCBOE employees all requisite knowledge and skills so that they would be completely prepared not only for the May 2nd election but also all later elections without having to pay for any additional consultant services from DESI or other firms. Given the CCBOE's late launch of the e-voting systems (in the last possible election that would be in compliance with federal law), a multitude of factors should have indicated that seeking staff proficiency in

all e-voting tasks manifested poor judgment. Factors militating against the possibility of proficiency include the County's inexperience with e-voting technologies, its decision to use a dual system, its newly decided and effectuated CCBOE reorganization plan, and the indictments against three CCBOE elections administration managers. By rejecting prepaid services, the Director and Deputy significantly increased the burden on the CCBOE. [Interviews with Deputy Director and Director; DESI testimony and documents; SOS-DESI Master Contract]

(e) It appears that Cuyahoga County may have been one of the last Ohio counties to resolve its ancillary equipment and contract issues so that the DREs and scanners could be launched in time for the May election. Cuyahoga dealt with these issues from April 2005, when the SOS approved the DREs with paper trails, through mid-March 2006. Many other counties, however, quickly resolved their ancillary equipment and contract issues and were able to complete the launch of their new e-voting systems in 2005, even with the exact same vendor and technologies that Cuyahoga had selected. Especially since the timing was critical to success, it is difficult to understand the Director's haggling with both the Board of County Commissioners (for additional DRE units) and DESI given that it dramatically delayed Cuyahoga's e-voting launch. Director Vu explained that the CCBOE was attempting to gain far stronger DRE testing and performance standards than in the Master Contract, and that it wasn't simply a matter of ancillary equipment price haggling. Given the federal HAVA deadlines for launching the DREs, which DESI undoubtedly knew as well as Cuyahoga, the time factor favored DESI's position however unreasonable or unfair this situation may have seemed to the Director and Deputy. The clock eventually ran out and Cuyahoga had to make the deal for many single source items whose late shipping date (some items have still not arrived, and DESI insisted that to order them it have no liability for delayed shipping) delayed other essential election preparation functions. [Interviews with Director; with other county BOE Directors]

(f) Even when the manager of Election Support flagged at the management meeting approximately 12-15 days before the election that the memory cards had still not been supplied and that it was increasingly doubtful that L&A testing for over 5000 DREs could be completed before the election, the Director kept insisting that "no additional staffing" for L&A testing was needed. The department manager had to keep pushing until temps were finally hired. It then required around-the-clock shifts of workers to complete the tasks. Department managers contend that there has been a constant lack of attention, judgment, and decisions made in a timely manner. [Interviews with managers]

7.29 Recommendation: Procurement for an election must be pursued and completed early in order to maintain leverage for fair pricing, shipping dates, and adequate service. The CCBOE must schedule its procurement so that all items needed are in its warehouse several months before an election, so all services sought can be researched, and deliberative weighing of credentials and fit can occur. Election supply vendors are well

aware of the election calendar. The CCBOE must ensure that it handles its procurement with sufficient alacrity and completeness that it cannot be exploited by a company running out the clock for single source or other hard to obtain items.

7.30 Finding: The Director and Deputy chose to install DIMS voter registration/absentee ballot database close to a major election (August-September 2004), well within the crucial ten week election preparation cycle for the presidential election and at the time of the largest influx of voter registrations and absentee ballot applications in the CCBOE's history. This installation and retraining of employees interrupted the entry of voter registration data and other time-sensitive tasks before the 2004 presidential election. The Registration and Absentee Ballot managers were not consulted about scheduling an appropriate time for its installation. Thereafter, shifts staffed by unevenly qualified temporary workers were tasked with the data entry of registration and absentee ballot applications — and committed numerous errors that ultimately may have cost citizens their right to vote. Yet the Annual Report 2004-05 does not acknowledge the poor choice of timing for the DIMS installation or any of the other DIMS issues that had come to light, and instead characterizes the entirety of the problem as one of “capacity.” [BOE Annual Report 2004-05 at 5; interviews with managers]

7.31 Recommendation: All future implementation plans for technology installation or upgrades must be timed in such a way as not to interfere with the efficient and effective execution of a major election.

Lower, rather than higher, standards of accuracy in election results were applied

7.32 Finding: The Director sought and received permission, on a temporary basis, to use a lower standard for accuracy in the “unofficial” count on May 2nd than ever before, a 35 vote variance per precinct (as opposed to 25 from previous years). In essence, this meant that so long as the number of votes cast fell within 35 votes of the number of electors who had signed in, that precinct's vote totals could be accepted without further investigation. Given that few County precincts would even total 350 votes in a primary, this request was implicitly requesting a permissible margin of error that, generally, speaking was higher than 10%. This should be compared to the punch card average of 2%. [Board transcript]

7.33 Recommendation: The goal for the successful implementation of electronic voting should be to meet or exceed the standards for accuracy established using the punch card voting process. The CCBOE should not sacrifice performance on the altar of technology.

Election preparation planning deficiencies

7.34 Finding: The CCBOE failed to anticipate some of the most crucial areas for generating plans and procedures for e-voting. A few critical points:

1. Despite the security and custody of memory cards being one consistent issue about which a great deal has been written, no effective planning occurred for

- capturing and inventorying memory cards and other security equipment early — and no search process was delineated for any missing equipment. Memory cards and ballots were still being recovered in early July — almost 8 weeks after the election. No inventory of security equipment was conducted until this Panel requested it [Run-throughs in the Pink Room; Interviews with staff].
2. Other problems included inadequate staffing in many Election Day roles and functions, unacceptable poll worker training, confusing and erroneous poll worker manuals, an ineffective structure for Election Day support for voters and polling locations (such as call center operations, zone-based supplies availability and delivery, supply bag return and unpacking, logistical support in the parking lot, and under trained staff at zone transmission sites). [Hearings; interviews with managers and staff]
 3. The Ballot Manager was ordered to deliver the memory cards to the warehouse before he had time to permanently affix labels on them designating the proper polling location. The labels were bundled with the memory cards by rubber band which led to some cards being sent to the wrong location. This lack of labeling was ordered by the Director in order to supply the cards for L&A testing. Ironically, delays in creating the scripts for the L&A test delayed the need for the memory cards for a number of days, which would have given the Ballot Manager sufficient time to securely affix labels to the appropriate memory cards before they were needed at the warehouse. [Interviews with managers and Director]
 4. The absentee ballot informational flyer sent out with the ballots failed to caution voters not to remove the stub or their ballot would be invalidated. An estimate of “hundreds” of absentee ballots were invalidated (not counted) for this reason [interviews with department managers and Deputy Director]

Given the short period of time available for planning and implementing the transition after running the last punch card election in November 2005, top managers failed to exercise sound judgment about how much the CCBOE could undertake independent of DESI and what areas DESI should have handled, e.g., training PW trainers and writing technical manuals.

Transitioning to a new voting or information system is obviously a major undertaking. Experienced consultants were available, and could have been included as a part of the budget to ensure a higher quality transition. But the Director and Deputy considered professional planning and consultation a prepaid part of the SOS Master Contract with DESI, and not a matter of a separate agreement for specialized services. DESI maintained that comprehensive transitional planning was a set of services they sold for a separate fee and would not provide free of charge. DESI, though, was only one of many firms available to supply these services. [Vendor Hearing; common knowledge of election consultants]

7.35 Recommendation: Given the risks — which materialized — the CCBOE managers should have chosen to hire highly qualified consulting firms or individuals to expertly guide the CCBOE in the various transitional tasks they faced in the exceptionally short period of time they had for retooling every aspect of their election management (from the beginning of December 2005 to May 2nd). When implementing any new technology in the future the CCBOE should retain outside expertise in project management and systems implementation to ensure that they have sufficiently planned for the roll-out of the new system and taken into account contingency planning for all possible outcomes. The consultant should also review all policies, procedures and staffing models to insure that they are sufficient to successfully operate the new technology once installed.

7.36 Finding: Implementation team meetings and department management meetings used for planning and advance troubleshooting of the election consumed tremendous numbers of hours but failed to plan in an operational manner for essential aspects of the May 2nd election. Numerous managers commented that the Director and Deputy were making the decisions on their own, without regard for managerial input.

7.37 Recommendation: The CCBOE management needs to improve their short and long term planning skills. All future project planning should be inclusive, participative and make efficient use of staff time.

Other judgment and planning issues

7.38 Finding: Attending SOS conferences allowed managers and assistant managers to share info with peers in other BOEs. This informal sharing of information and problem-solving was especially important when facing the huge transition to e-voting. But the Board and top managers often restricted those who could attend these meetings to the top administrators — primarily Director, Deputy Director, and Administrator Platten. [Personnel records; interviews with Managers]

7.39 Recommendation: The CCBOE should make arrangements to allow the middle managers (including assistant managers) to attend the Secretary of State Conference for those portions of the program that relate directly to their work.

7.40 Finding: As late as June 9, when asked to use hindsight and consider what he wished he had done differently in preparation for May 2nd, the CCBOE Director had yet to grasp the enormity of the issues confronting the CCBOE as a result of the May election. During a recent interview with panel members he said, “there’s not much that I would change at all. We had a singular issue, the absentee ballot scanner problem, which led to the hand count.” [League of Women Voters & CSU Center for Election Integrity Conference: *Lessons Learned*, BOE Directors Panel]. More recently, neither the Director nor the Deputy have publicly accepted responsibility for May 2nd problems but instead have blamed middle managers and DESI for the problems that occurred. [Interviews with Board Members; Conference transcript; interviews with Managers]. As of mid-July, the Director has acknowledged that they “did not run a good election.” [Interview with Director]

7.41 Recommendation: Executive Management must come to grips with the challenges going forward toward November by drafting a plan (with inclusive participation of department managers) to remediate all of the issues arising from the May 2nd election.

7.42 Finding: The CCBOE top managers do not seek legal advice in a timely manner. Instead, they tend to believe that they can read statutes as well as any attorney and so such consultation is a waste of time. Examples of recent legal questions that, with proper and timely advice, might have eliminated many ensuring problems include:

- Whether pencil used on absentee ballot envelopes voided the ballot.
- Whether a BOE Director can independently generate the processes and standards for a hand count or DRE remake of absentee ballots and other optical scan ballots.
- Whether the CCBOE's provisional ballot errors that were determined after the official count but before the Presidential recount commenced should have been accounted for in the recount.
- Whether CCBOE workers were permitted to pre-sort and pre-count ballots outside of witnesses during the 2004 recount.

[Transcripts of Board meetings December 2004-June 2006]

7.43 Recommendation: The Board and the Director should create an avenue for CCBOE staff, with concerns about the overall administration of the agency including legal questions, to raise issues and concerns through a confidential channel to air their concerns directly to the Board without fear of recriminations. A new independent office lateral to the Board should be created called the Ombudsperson's Office.

Consequences of management decisions and systemic problems

7.44 Finding: Executive Management has lost respect broadly within the managerial ranks and also among some line staff. The reasons for this vary but include: managerial and staff conviction that Director and Deputy withhold from the Board crucial information regarding problems that have arisen; the reports they have heard that the Director has directed some managers not to relate problems to Board Members who ask them direct questions; the failure to demand and obtain timely corrective action from DESI for database defects; blaming of others for CCBOE performance problems rather than taking responsibility with the attitude that "the buck stops here"; the recent restructuring that most managers criticize heavily as crippling employee morale and performance; and the extreme work hours demanded by management at various points from February-May, which some assert to have been avoidable with proper planning and management. [Interviews with Managers & line staff]

Many managers have Judged the executive management as placing values such as cost factors ahead of accurate, verifiable, prompt, and honest reporting of election results.

Line staff report a culture of “see nothing, say nothing” for survival. Many employees feel they are caught betwixt and between, with no acceptable recourse. [Interviews with Managers and line staff]

7.45 Recommendation: The Board and the Director should create an avenue for CCBOE staff, with concerns about the overall administration of the agency, to raise issues and concerns through a confidential channel to air their concerns directly to the Board without fear of recriminations. A new independent office lateral to the Board should be created called the Ombudsperson’s Office.

7.46 Finding: The ultimate management and departmental reorganization approved in December 2005 seems to have been heavily influenced by the fact of criminal indictments against two CCBOE employees. The CCBOE had already decided to keep the two paid in full until the conclusion of the trials, but each was allowed to take paid administrative leave whenever she chose — in other words, to absent herself at her own choosing. After the reorganization, in January 2006, a third employee, Administrator Jacqui Maiden, was indicted. By placing and retaining these three employees in management positions, it meant that critical functions were not fully attended at the time and in the manner most needed by the CCBOE in preparing and conducting the May 2006 election. Further, the employees who had to pick up the slack for these managers often lacked the authority, knowledge, or time to complete the duties in the manner needed, for the prescribed staffing levels had not taken account of the extended absences and reduced attention of these employees. These choices greatly retarded the agency’s ability to be prepared for May 2nd.

By striving to keep each of these indicted employees in management positions but external to the departments where their alleged actions have led to indictments, the CCBOE was faced with moving those managers with developed expertise and strong working relationships to new departments whose tasks were largely unknown to them. This meant that when attempting to meet the greatest transition the CCBOE had perhaps ever faced, the agency could not capitalize on the developed knowledge and experience of some managers and was faced with new assistant managers who were ignorant of their new departments and duties.¹⁵

Compassion for the indicted employees, especially if they are innocent of the charges levied against them, can be laudable. But given the tremendous impact on the agency in its ability to prepare for and manage the May 2nd election, it is hard to understand why

¹⁵ In the Ballot Department, former Manager (Dreamer) and Assistant Manager (Grier) both were indicted and thus were not returned to their department. In the restructured CVS Department, Dreamer was assigned to be Assistant Manager for Absentee Ballots; in Booth Officials, Grier was assigned to be Assistant Manager for Booth Officials. To make way for Grier, the Booth Officials’ highly experienced Assistant Manager Betty Edwards was transferred to CVS to be Registration Assistant Manager. To make way for Dreamer, other more knowledgeable employees were moved. To fill the vacant Ballot Department Manager position, the CCBOE hired externally and filled the Assistant Manager position internally.

they were retained in management. These employees were inevitably distracted and took time off frequently. [Board Member interviews; Department manager interviews; Administrator Platten interview]

7.47 Recommendation: The indicted employees should be immediately reassigned from their managerial positions, and qualified interim managers appointed. This should occur with the proviso that following the verdicts in the trial court, a reassessment will occur of whether the employees should be returned to any (and which) position within the CCBOE.

Election Division Administrator

7.48 Finding: Many components of the Election Day support system set up to provide information and assistance to poll workers and voters did not function well or at all on Election Day. Staff who were assigned to the command center were not told what its purpose was, and were not trained in what they were supposed to do. Thus, when calls came in from polling places and voters, many received no response or any corrective action. Information was being recorded and stacked up in the belief someone would come and act on the problems, but no one did.

Numerous managers and line staff in her division commented that Administrator Maiden has been non-responsive to inquiries within that division concerning election management. Reportedly, since her indictment, the Administrator does not answer most of her email, including email from those she is to supervise and direct.

7.49 Recommendation: If Administrator Maiden desires to remain at the CCBOE as Election Division Administrator, her leadership and responsiveness will need to improve.

Departmental performance standards and quality controls

7.50 Finding: The Ballot Department functions include: preparing ballots, including races and candidate names, issues, questions; editing and proofing duties, before sending absentee ballots to the printer; burning memory cards; Election Day uploading of memory cards; scanning of absentee ballots; providing unofficial election results; providing official results; inventorying all items of a security nature, e.g., memory cards, encoders, keys; rectifying the poll books; some provisional ballot activities; for questions and issues that will appear on the ballot, providing legal notices and proclamations and arranging for the printing thereof.

The current Ballot Department Manager's knowledge and comfort zone lie in Information Technology and technical areas. He had no experience in the processes and administration of elections when he joined the CCBOE.

After taking the position, executive managers directed the new Ballot Department Manager to answer his own questions by reading ORC Title 35 (the Ohio Statute on Elections). Problems affecting Ballot Department decision-making were significant,

including a failure to request sufficient temporary staff for conducting the unofficial and the official count. It is also unclear whether all required proofing of ballots, including rotations, were undertaken prior to the May 2nd election. The pink room operation was in full chaos by 8:30pm on the day of this election. The Ballot Department had to depend on temporary hires who were not subject to sufficient supervision.

7.51 Recommendation: It is unclear whether the Ballot Department Manager has the interest and dedication to practical election management and the passionate concern for voting integrity that are essential prerequisites for the Ballot Department Manager position. The CCBOE should evaluate the department's performance and, if the manager is retained, provide him with the training and assistance necessary to avoid a repeat of the problem of May 2nd.

7.52 Finding: In seeking to discover whether management had set concrete performance targets, undertaken meaningful reviews of actual performances in light of targets (e.g., poll worker performance; voter registration entry with accuracy and speed; polling place supply bags packed with all needed voting location supplies), we found a dearth of concrete managerial objectives and performance standards. It appears that technological objectives (e.g., having sufficient DRE touch screen voting units at the polling places) displaced managerial attention from other aspects of the May 2nd election.

Further, looking backward, from 2004 to the present, we also find little indication of concrete performance improvement goals even after broad public dismay and well-documented deficiencies at certain polling locations. For instance, despite significant public concern over certain poll worker deficiencies in the November 2004 and 2005 elections, the CCBOE did not undertake a critical assessment and improved performance plan for training poll workers. While these problems are mentioned in the CCBOE Annual Report 2004-05 (p7) with strategies for improved recruitment, upgraded qualifications, expanded training, and evaluations, the record shows virtually nothing was done on any of these points. Until the May 2nd primary debacle, the top managers (Director, Deputy Director, Election Administrator Maiden) and the department manager judged the election performance of the polling places, and their training programs for poll workers, to be relatively satisfactory and not requiring systemic improvements in the departmental functions.

Departments are required to file "Weekly Reports" that document the work occurring in preparation for an election. These do not follow a common format, and vary greatly in the information they report. This report is the primary mechanism for sharing information between departments and with the top managers, and they also are discussed at the weekly management meetings. Some reports, notably the Booth Officials Report, tend to be well written, well-structured reports that flag problems and potential problems, including those on which higher management decisions will be required. Other Departmental reports filed in the period between January-April 2006 are vague and fail to note even glaring problems such as major delays (e.g., producing all the memory cards needed for L & A testing) that will cascade into causing delays for other departments. The Director and Deputy both report that the Weekly Report "format" has been in

existence for many years and they have not seen any reason to modify it. [Weekly Departmental Reports; Interviews with Director and Deputy; with managers]

“Wrap Up Reports” required after most election cycles feature the same problems as the Weekly Reports. If these tools of self evaluation are to function as a mechanism for constant improvements, the direction needs to be fully revised and include performance measures. [Wrap Up Reports]

7.53 Recommendation: The weekly reports and wrap up reports must be reconceived so that essential information is able to be discerned immediately. Some Reports, such as the Procurement Department, are full of minutia and are vague on what needs to be done. The Reports provide so little useful information that they actually give the reports a “make work” name. These should be streamlined for the author’s efficiency as well as the executive managers who are to read and act on the reports.

7.54 Recommendation: During an election cycle, the weekly reports for both the manager and the Director should include a two page progress report on achieving the milestones necessary to successfully conduct an election. These reports should be based on an election plan created by the Director and approved in advance by the Board, and highlight deviations from the schedule, areas of concern for the coming election, plans for addressing these concerns and any contingency plans that need to be in place to insure a successful election. As a guide, the CCBOE should consider the format used by Joe Nista to report progress with GEMS implementation

7.55 Recommendation: The policy manuals for every department need to be re-written and vetted both inside the CCBOE and with watchdog groups and the CCBOE’s election law attorneys before being finalized.

Managerial focus and leadership

7.56 Finding: Restructuring the CCBOE to achieve downsizing of the permanent staffing and personnel budget, and improving the technological aspects of the CCBOE appear to have been chief objectives of the CCBOE. The Panel could not discern any significant efforts designed to systematically improve election performance by increasing the accuracy of vote tabulation, of provisional ballot validation, and other concrete steps with performance objectives. The Director’s attention to the CCBOE’s actual elections performance has ebbed and flowed, with some periods of what some middle managers view as extreme micromanagement, and other times with total delegation to the Deputy for ongoing operational management. Director Vu’s talents, primary interests and expertise, which are substantial, lie within technical and computerized operations. [Interviews with Director, Administrator Platten, Deputy Director; press reports on Director Vu; Interviews with managers and Board Members]

The Director and Deputy have alienated the County Commissioners, the County Prosecutor’s office, personnel in the Elections Division of the Ohio Secretary of State’s Office, the CCBOE’s middle management, and numerous line staff. Building positive

relationships with other agencies is part of the job of top managers of an interdependent agency. The CCBOE not an island; cooperative relationships are essential. Part of the job is to act as an emissary for building good will. It seems, however, that the top managers failed to recognize that their conduct toward other agencies and personnel can cause the CCBOE to receive the payback of non-assistance and non-cooperation.

7.57 Recommendation: CCBOE needs to develop and maintain positive relationships with other government offices in order to complete its tasks. The Cuyahoga County Board of Elections needs to work assiduously to shed its image of being an imperious arrogant institution managed by those who have nothing to learn from others.

7.58 Recommendation: The CCBOE and the County Prosecutor need to cultivate a cooperative relationship, instead of an adversarial and occasionally hostile one. Attorneys assigned to the CCBOE should be encouraged to undertake additional training in election law — state and federal — in order to fulfill their tasks of advising the CCBOE effectively.

7.59 Recommendation: All managers in the CCBOE should seek to cultivate positive relationships with the public and with watchdog/advocacy groups which are seeking to improve elections. They should approach these organizations and their recommendations with an open mind and as allies in seeking the best performance possible for the citizens of the county.

7.60 Recommendation: Departments should be routinely scheduled to give reports to the Board in meetings as well as be allowed to email the Board Members. Email privileges, however, must be used judiciously.

7.61 Finding: Historically the CCBOE has been accused of hiring or promoting individuals to be managers without demonstrated proof of their management skills or instincts, and that it has not included these points as part of the essential criteria when seeking to hire managers. [Interviews with Director and Deputy Director; managers]

7.62 Recommendation: The CCBOE Board Members should give the Director and the Deputy Director that authority to bring forward the best possible individuals to fill management positions at the CCBOE. Where election management knowledge is critical, the CCBOE should identify and follow the best practices from other Boards of Election throughout the country in identifying and hiring the best available individual to perform that management function at the CCBOE. The CCBOE should use the following as a guide:

1. A good manager organizes the work and workers so that the highest productivity can be achieved with the fewest frustrations and disruptions; delegates work and organizes accountability structures so that workers and managers know which workers are responsible for what tasks on what schedules, and what the consequences will be for not performing; creates a positive workplace and builds a team attitude; ensures that staff are trained properly in the skills and knowledge

- that they need to perform their jobs well; corrects staff mistakes in a manner conducive to their improvement as workers, and if work quality does not improve after fair notice and correction, either assigns work that is more appropriate for that workers' skill set or transfers or dismisses him/her; and looks out for and seeks to protect workers from unfair or injurious work expectations issued from higher managers so that all can get their jobs done with the most productivity and joy possible.
2. While the skills for achieving these objectives can be learned and enhanced over time, unless a person has the instincts and "people skills" for management, the critical nuances of quality management cannot be mastered, and the results will lead to the kinds of problems experienced by the CCBOE recently. The higher the manager in the hierarchy, the more critical it is for the manager to have highly developed managerial skills and instincts because their absence can wreak great damage on the entire operation.
 3. In order to permit and promote good departmental management, top/executive managers:
 - Must consider managerial time as a scarce resource that must be carefully conserved and invested where it is best deployed, and not treat managers as another pool of labor that can be used for gap filling when other workers are unavailable;
 - Cannot treat the departmental staff as a general pool of workers to be pulled away from departmental business and sent around to wherever else they might be needed;
 - Must seek to empower the management team to act as managers; where there are executive level concerns over management of a department, the executive/top managers need to set up meetings outside the hearing of departmental workers for learning what has transpired in order to discuss and problem-solve, and if possible, reach a consensus that can then be announced and implemented by the department manager; the pervasive sense of departmental managers and some divisional administrators that they might as well not make any decisions because they are constantly being undercut and contradicted by the Director, Deputy and HR Administrator has to end.
 - Must themselves manifest an attitude of open-minded learning and desire to hear ideas from others, rather than closed minded conceit about one's special gifts or expertise.
 - Must be able to conduct effective short and long range planning with the involvement of departmental managers, and not waste time by the procedures set up for planning.
 4. Simply because someone is good at performing work in a department, or has good "people skills" with co-workers, or is well liked by top managers does not justify

promotion to a management position. Far more important criteria are those listed in point 1, above. At the CCBOE, it seems that quality management skills are not perceived and valued as a particular knowledge base and skill set that is needed. Thus, it is not surprising that managerial hiring has not focused on ensuring that these skills have been demonstrated. Knowledge about elections tasks can be learned. But those who have knowledge of elections tasks but poor ability to manage will retard the quality of work, organize it in an unproductive and wasteful manner, be unable to plan effectively, and generally retard the CCBOE's ability to achieve the public trust and charge of conducting accurate elections promptly and lawfully.

7.63 Recommendation: As a part of the management consultation mentioned above, review and revise the expectations and credentials for all managerial positions. Include criteria specifying that vacancies for all managerial positions must be posted broadly, and the hiring and promotion process must be fair, with neither preference nor negative accorded on the basis of experience in CCBOE positions or on political connections.

7.64 Recommendation: In the transitional period of the next two years, all managerial search and interview committees should involve persons external to the CCBOE who have demonstrated judgment, insight about management and/or high level managerial experience to assist in identifying, recruiting, and hiring the leadership the CCBOE needs. This Panel can suggest persons who might be willing to volunteer their time.

E-voting transition: Transition planning and execution

Deputy Director and E-Voting Conversion Project Manager

7.65 Finding: The conversion to electronic voting in Cuyahoga County was at best problematic and at worst a disaster. Deputy Director Dillingham served as e-Voting Project Manager during the CCBOE's conversion to electronic voting. The list of failures to successfully manage this critical project includes:

1. Rejecting critical assistance from DESI that was already covered by the contract saying, "If we have to do it after May, we want to learn to do it for ourselves before May." Thus, some services that were prepaid under the SOS Master contract with DESI were wasted. Deputy Director Dillingham demanded that DESI employees teach CCBOE employees how to do every task themselves despite the abbreviated time available for this instruction and practice. [Interviews with Deputy Director and Director; with managers]
2. Wasting valuable time in extended, aimless Implementation Planning meetings where she ignored the lists of issues others brought and showed little-to-no interest in the concerns and problems managers were encountering. [Interviews with Managers; with Administrators; with Board Members]

3. Failing to anticipate areas of possible systems breakdown and generating plans to prevent these breakdowns, as well as fashioning backup or contingency plans. Another area of importance lay in formulating operational plans with realistic expectations of people/staff. [Interview with Deputy Director; operational run-throughs in Pink room; interviews with other managers]
4. Failing to plan for adequate staffing in all areas of the agency insisting that her staffing plans were sufficient, even when workers who were involved in core time-bound tasks in their own departments had to be sent, in a crisis management mentality, to wherever the latest fire had erupted. [Interviews with CCBOE management staff]
5. Allowing friendships to influence her management staffing recommendations. [Multiple interviews with CCBOE management and line staff]
6. Rejecting practical solutions and suggestions, such as creating a “checklist” to assist poll workers and the provisional ballot voters to be aware of all the requisite steps required to insure that ballots would be completed in a valid manner. The Deputy Director replied that she was “opposed” to checklists. When pressed for explanation, she said that a checklist would mean that a poll worker “would not have to pay attention” at training. In response, an interviewer said that evidently poll workers were not understanding the steps even after training, Deputy Director Dillingham said that “might be true” but she was “still opposed.” [Interviews and discussions with the Deputy Director]
7. Rejecting the need for optical scan ballots to be available as backups at polling places in case DREs do not function properly. The Deputy Director stated emphatically “we won’t do that.” When pressed for an explanation, she said that if optical scan ballots are included in the precinct supply bag, the poll workers won’t have any reason to try to set up and run the DRE units, and they would use only paper ballots. [Interviews and discussions with the Deputy Director]

7.66 Recommendation: Given the panoply of serious issues raised, as the public’s representatives the Board must decide what to do about the CCBOE’s current management and managerial culture. Bearing chief responsibility for the decisions and performance on May 2nd are the Director and the Deputy Director/Project Manager for the E-Voting Conversion. They are highly talented and knowledgeable individuals. But given the history and performance of the CCBOE over the past two years and especially on May 2nd, the Board needs to evaluate whether they can provide the leadership for moving the CCBOE onto the path of achieving elections administrative excellence.

The standards against which we believe these incumbents and any potential replacements must be measured include:

1. a demonstrated history of managing to achieve high quality employee performance, moving rapidly from low to high employee performance capability;

2. some well-regarded managerial experience in achieving smooth workforce transitions between outdated systems and new;
3. an ability to inspire the trust and respect of workers throughout the organization, and who comfortably demonstrate respect for workers while inspiring them to perform at high levels of productivity and excellence;
4. demonstrated commitment to honesty, fairness, and lawfulness in personal and professional dealings.
5. an ability and commitment to forging relationships of respect and transparency with other government entities.

Future administrative issues and further study

Consultants should be retained for assisting with improving managerial structures, operations and personnel policies.

Unlike some past CCBOE undertakings, however, where abstract knowledge of private sector business organizational structures seemed to be the primary credential for the CCBOE managerial study, any consultants retained must:

- be sophisticated in election management issues as well as have broad experience in effective administrative structures for handling widely varying amounts of work (many such firms exist nationally);
- must understand and integrate into the plan utmost concern for internal and external (public) accountability structures, and for legal compliance; personnel staffing and managerial organization plans must be designed so that the legal and ethical requirements for elections can be met on timetables that are nonnegotiable and with employees who are treated fairly;
- must seek within the organizational structure to achieve continual, demonstrable improvement in elections performance with appropriate measures for achieving ever higher standards of accuracy in all aspects of elections administration, from data entry of voter registrations to tabulating the vote;
- integrate working knowledge of the complexities of Cuyahoga elections, which differ dramatically from other election jurisdictions and manifest sufficient understanding of the ebb and flow of work in the elections cycles, which differ year to year (and in odd versus even years) and on the basis of two-year and four-year repetitive cycles;
- must incorporate recognition that the CCBOE needs to develop and maintain cooperative relationships with the various sister agencies and governmental units which assist the CCBOE in its work;

- understand that the CCBOE employees have undergone repeated and frequent restructurings with varying, often negative impact rendering them more cynical about any additional restructuring, and integrate into the approach a method for building employee support for managerial changes.

Personnel Policies and Practices

7.67 Finding: Staff — both managerial and line — at virtually all levels express deep concerns over the CCBOE’s personnel policies and practices. At least three recent staff departures are traceable to this constellation of issues and several more staff have expressed plans to leave before the year is over. Each of these individuals has developed substantial expertise in an area of elections operations, and these departures, in the words of one staffer, mark a “brain drain” that the CCBOE cannot afford.

Retention of highly valued employees should be a major consideration of any high quality organization — private or public sector. Policies and practices, and the general workplace climate, make a huge difference in whether an organization can attract and hold top quality candidates for jobs. If the organizations performs well in recruitment and retention, its overall costs can be reduced for it does not have to undergo the added costs of replacement and retraining of a valued worker. The employer benefits from the increased knowledge and skills that the established employee offers the organization. And existing employees do not lose time in interviews and reviewing applications for employment.

Numerous very serious personnel issues have been raised with the Panel, and we have accorded them dedicated attention. They can be organized topically:

Workplace Climate: Not a single employee described the CCBOE workplace in predominantly positive terms. Employees described the CCBOE workplace with words including: poisonous, toxic, backbiting, vicious, vengeful, mean, nasty, vicious, hierarchical, exploitative, oppressive, a sweatshop, cliquish, favoritism unfair, arbitrary.

Staffing Levels and Quality of Work: Staff allege that:

1. Excellence/quality/time schedules are non-achievable goals given the current staffing.
2. The CCBOE failed to include some excess or overflow, on-call staffing in order to have enough workers to take care of the unexpected in this last election.
3. Even though the Director promised e-voting would require less work time and would be easier than the punch card procedures, the new e-voting systems have created more work and required staff time — not less.

Work Hours: Staff allege that, during the election week (May 2-7), various workers were ordered to work the following hours:

- Three back-to-back 24-hour shifts;
- Two 24-hour shifts with three hours off and then to report back;
- One 24-hour shift with 5 hours off and then an 18-hour shift.

During L&A testing, many workers (both line and managers) were assigned 12-hour shifts, 7 days a week, with half being assigned in the night shift, for approximately 10 days of work.

7.68 Recommendation: Strategic reconsideration must occur of the amount of permanent and temporary reserve staffing in each department and throughout the agency which is appropriate, taking into account each of the elections that occur over the four year period. Hiring must then occur in all departments, after posting nationwide.

7.69 Finding: The CCBOE's staffing is so low that managers are required to work excessive hours, effectively off the clock and unpaid because the comp time is maxed out. Some salaried employees figure that the amount of overtime that has been required has meant that some weeks they work more time uncompensated than compensated. This means that their hourly rate is less than half of what they expected. These personnel practices and expectations are unacceptable.

While hourly workers have both compensatory time accounts and overtime pay of time and a half, managerial employees have not been compensated for the excessive time they have put in by demand of top management. Staff believe that top management does not care about their excessive work hours and refuses to listen about the hardships it imposes, including the negative impact on job performance. Some staff concerns and comments include:

1. Some managerial workers, for over three months, did not have more than one day off per week, and had many weeks with no days off at all. And if they took any additional time off, they would be "written up."
2. Hourly workers are not interested in spending their entire lives at the CCBOE any more than managers, even though they receive better compensation for it. All workers have an right to have a family life and personal time that must be respected.
3. Long hours do not take into account medical conditions and nutritional needs. They have been ordering diabetics to stay and work 12 hour shifts on penalty of losing their jobs.
4. Any workforce that is this overworked is an example of poor managerial planning.
5. Notifying staff at 3pm on Friday that they must work both weekend days is unacceptable.

6. Standing to do L & A testing for 12 hour shifts with no stools or chairs for sitting is cruel and may be illegal.
7. It's not just the excessive work hours: it's the stress, medical problems, nutritional issues, can't eat/sleep, disruption of family, constant fatigue and overall demoralization.
8. Everyone should be on the clock for fairness no matter what their rank. "They have been exploiting managerial workers with no tracking."
9. "Just because we can't unionize doesn't mean we have no rights."

7.70 Recommendation: Although the CCBOE Executive Management believe the CCBOE receives an overall financial benefit of squeezing extra labor from each managerial employee without having to pay for it, this staffing approach is both imprudent and inhumane. Trying to avoid hiring more permanent employees and paying their benefits is a strategy some employers use, but good employees normally have exit opportunities. This strategy cannot function long-term. It can lead to even lower productivity because workers cannot achieve quality outcomes efficiently if they are fatigued.

7.71 Finding: The CCBOE did not provide the documents that were requested by which we could document the managerial work hour excesses. The Director said that the documents existed and the HR Administrator said there were no such records. But we have sufficient documentation to find that managers have been ordered to work hours far in excess of what is reasonable or normally expected, and that they have been used as a reserve labor pool to fill staffing gaps. In some cases, the ordered work hours can only be described as appalling. [Interviews with department managers, Staff, and Board Members]

7.72 Recommendation: The CCBOE should determine the appropriate staffing based on a strategic re-evaluation.

7.73 Recommendation: Immediately end the use of managers as a reserve labor pool. Start keeping accurate track of work time.

7.74 Recommendation: Staffing at all levels must increase in accordance with work demands, consistent with other recommendations

7.75 Finding: The CCBOE has separate comp time limits for managers and for hourly workers. For both it is a use-it-or-lose-it approach. The CCBOE reduced the comp time for managers that was permitted to accrue from 140 to 35 hours, and has limited the opportunities for managers to take this time off. Thus, managers have been stripped of a major employment benefit with no advance discussion of its impact. The main executive managerial reason given for the change was to ensure that some managers are always in the building in every department. [Personnel Policy; interviews with executive managers]

7.76 Recommendation: Many other ways are available to ensure that the time off options are spread around without depriving everyone of 80% of their comp time. A departmental and managerial sign-up schedule carefully administered is a fairer mechanism with fewer unintended consequences.

7.77 Recommendation: Change managerial comp time limits back to 140, with corrected, fair directions on when and how it may be used. Consider using the county personnel policies as a model .

7.78 Recommendation: Personnel procedures need to be clearly defined in writing and carefully explained. The procedures for filing complaints lack clarity and must be improved. Many personnel evaluations demonstrate a need for further explanation of how employees are supposed to use their comp time. The procedure for filing complaints needs to be clearly communicated to all staff so that they are aware of the proper measures they should follow when voicing problems. Staff should not be disciplined for not following procedures they were not aware existed.

7.79 Recommendation: At the end of each year give employees the option of cashing in their comp time at seventy five cents on the dollar.

7.80 Finding: Employee morale may be at an all-time low. The factors include:

1. Climate of disrespect; that workers at all levels feel that they are treated poorly and that they also treat others poorly because of overwork and feeling beaten down and unappreciated;
2. Retribution rather than appropriate accountability drives disciplinary actions; a perception exists that one can be a poor worker and survive fine, but a good worker with ideas and recommendations for improvements will be targeted;
3. Indicted personnel are still in administrative jobs;
4. Patronage hiring and retention; that some people who have poor work ethic are continued dragging down the productivity of all and the sense of workplace fairness; political party interference with discipline;
5. Top managers always stressing the quantity of work and sacrificing quality of work;
6. Low salaries, long hours, loss of personal time;
7. Lack of training in legal requirements for their jobs and the feeling of great legal risk if they make errors;
8. Management not fixing tech problems like DIMS voter registration or absentee ballot problems, and not notifying or explaining to the public (“made to look dishonest or worse”);

9. The press coverage on the election problems that occurred; the fact that some staff tried repeatedly to flag and resolve these problems in a timely manner without success “makes us look like a bunch of idiots”;
10. Salary equity issues — perception of bias in favor of IS Department; no other market comparability studies were undertaken for other work classification; women staff and managers’ perception of being unfairly paid as compared with men;
11. Top managers rarely call to say “thanks” even after extraordinary work hours;
12. No merit pay increases/bonuses.

7.81 Recommendation: The CCBOE must create a mechanism for rewarding staff for enduring long hours and performing above and beyond the call of duty in what has been one of the most thankless jobs in local government. The CCBOE should adjust its current compensation structure to provide merit bonus pay for each employee for achieving organization performance goals and for individual employees on the basis of performance evaluations.

7.82 Recommendation: Performance reviews have not included performance measures and concrete improvement objectives. Merit increases should be available for quality work, and other incentives created to reward employees for quality performance. Disciplinary processes have not been consistently used when the same types of conduct and performance breaches have occurred.

7.83 Finding: Despite being “written up” repeatedly for poor performance, some employees continue in their jobs with injury to the voters and to workplace morale. For instance, a worker entering voter registrations, validating provisional ballots, or issuing absentee ballots must have high accuracy levels in typing and a high sensitivity for identifying and correcting spelling input errors. Yet some of the workers currently assigned to these tasks have manifested repeatedly that they do not have these skills. Some problematic employees who are finally removed from one department have been transferred to another where the worker then becomes a new department’s problem because of the same attitude or skills issues. [Interviews with CVS managers and staff; other managers]

7.84 Finding: Salaries of IS workers were dramatically increased with the explanation of in order to make salaries competitive in the IT market. It is unclear whether the skills of these employees have equally competitive qualifications to warrant this dramatic salary increase nor whether performance was taken into account before this increase [2005 reorganization plans and salary schedules]

7.85 Recommendation: Each employee must be given well in advance of evaluation, and preferably on an annual basis a clear set of fair performance goals against which he/she will be measured. For workers doing the same jobs, the standards should be

virtually identical. Performance reviews must assess whether the employee has attained these standards, and if not, identify a strategy for improvement. Where improvement does not occur in a reasonable period of time, separation from the agency must occur, without any political interference to protect these workers. Merit increases should be available for quality work, and other incentives created to reward employees for quality performance.

Demonstrated sub-par performance deficiencies on fair criteria should result in no more than one transfer. Thereafter, using the progressive discipline system, dismissal of the employee should occur. Repeated poor performance by individual employees cannot be accepted, and managers must have the ability to exclude those persons from their departments. The Policy and Procedures Manual should be revised to redress these issues. Employee input should be sought and the final language needs to be explained carefully to all.

7.86 Finding: CCBOE employees are legally not permitted to unionize or engage in any form of collective bargaining. But this does not mean that the employees cannot consider forming mechanisms, such as an employee council, by which their concerns can be brought to top managers and the Board for resolution.

7.87 Recommendation: The CCBOE should form an employee council comprised of five staff level employees, three managers, the Director and one Board Member to meet regularly to discuss employment issues at the CCBOE.

7.88 Finding: The second restructuring approved Executive Management's request to flatten job classifications so that job titles no longer distinguished greater experience and competency than a beginner in the department. The Administrator of HR was the primary proponent of this approach, justifying it because the different titles that had been in existence created barriers to redeployment of workers in tasks that they felt were not appropriate to their skill or title.

The creation of many departments, CVS for example, resulted in many "senior clerks" being reclassified with most being demoted to the lowest title—"technicians." The structure/organization of these departments has been flattened, leaving three real levels at each department: management, specialists, and the mass of technicians who have experience varying from minimal to decades, and a wide range of competencies. Employees have expressed concern over the lack of any opportunities for advancement in the CCBOE. [Reorganization plans; personnel files; staff interviews]

This flattening of job categories, and virtual elimination of progression generated a number of dysfunctions for the agency. These included valued senior employees being returned to titles that did not distinguish them in any manner from the newest hires. This change not only demeaned these mid-level and senior employees but also depressed their willingness to use their developed expertise and supervisory skills in the May 2nd election. It is broadly perceived that embedded in the changes is a latent managerial judgment that all these workers are essentially fungible — that experience, dedication, and knowledge of the job do not matter and need not be recognized in any manner.

7.89 Recommendation: A series of job classifications should be created that allow for employee recognition for talent and increasing competency. For instance, the title “Technician” could be graded into I and II, and Specialist I & II. Good employees want to have a possibility of progression, and the smart employer generates a system that will entice the best to remain. Salary should also increase as the classification of an employee progresses.

7.90 Finding: Employees at all levels have experienced what they consider to be continual disrespect, rudeness, condescension and put-downs by top managers.

7.91 Recommendation: Management must be able to inspire workers to do their best work, to protect the public trust that is elections management. To be effective, they must be able to show respect and fair treatment of employees. The persons filling these jobs set a tone and contribute to a culture that, at the CCBOE, must improve decisively. Managers need to be more mindful in the way they address their staff. Many complaints have been made concerning managerial interaction with staff. Tempers and disrespectful treatment of staff should not be condoned.

7.92 Finding: Managerial self evaluations and supervisor evaluations repeatedly indicated a need for managerial training, including in handling difficult and non-responsive employees. Training desired by managers was not limited to issues relating to the new electronic voting system. No coherent or effective training programs have been fashioned for managers in managerial skills and none in the specific duties of their departments. Frequently when asking for training, new hires have been told to read Title 35 of the Ohio Revised Code and to read the directives. [Interviews with managers; personnel records]

7.93 Recommendation: Managerial training should be made a priority. The CCBOE needs a dedicated Training Officer to help identify needs and coordinate external consulting and training services. Classes need to be scheduled in light of the election calendar and the need for recovery post-election.

7.94 Finding: The training contracted for CCBOE managers must be properly geared for the knowledge base and skills that are needed in the CCBOE. Some of the training dollars have been wasted by contracting for generalized services of the Election Center in Auburn Texas, which is not geared toward Ohio election law compliance. Managers report it has been a delightful “junket” but cannot substitute for the managerial training and specialized information they need. Additionally, training for managers must take into account that the legal standards and legitimate expectations differ between the private sector and a public agency such as the CCBOE; public accountability is a value that must be inculcated throughout CCBOE training, and not ignored or an afterthought.

7.95 Recommendation: That a new management position, Training Officer, be created. It should be staffed by a person with significant skill and experience in structuring educational programs or courses for developing both skills and knowledge. Key responsibilities to be exercised by this person for drafting RFPs for training, for

evaluating responsive bids/proposals, and for supervising the creation of supportive instruction/policy manuals. Ideally, the Training Officer would be a person who has experience working in elections (at the polls or in the CCBOE), or who can obtain that experience immediately by working at the polling places. The selected candidate should plan to work at the polls at least twice a year, rotating into completing the training for the particular position and filling it at the polls. This staff member should also rotate into temporary position in each department to learn departmental tasks, demands, and personnel. The Training Officer should exercise primary responsibility to analyze all internal training needs at all levels with both permanent and temporary staff. The officer should take charge of poll worker training.

7.96 Finding: Constant shifts in managerial staff seemed to damage relationships between managers and assistant managers, as well as relationships between staff and management. The movement of managerial staff results in the need to retrain managers in the responsibilities of their new departments. Many of these managerial shifts were ordered during key periods. Managerial self-evaluations indicated their awareness that they are not as knowledgeable as they need to be. These managerial reassignments whose impetus varied from bad relationships or circumstances such as indictments, often led to new managerial teams that were not as efficient as the prior assistant manager/manager relationship.

7.97 Recommendation: The need to move employees from a certain position should not displace more capable and qualified staff members. Better judgments are needed about how and when to fill managerial positions.

7.98 Finding: The cooperation and teamwork required of employees within the agency is not impaired by the employees' political affiliation. The employees — including managers — tend to think of one another in terms of competency, ethics, and dedication, sprinkled with personal judgments such as “difficult person.” The agency has some marginal employees from each political party. It also has some outstanding employees. [Interviews and observations; personnel records]

The Board has both permanent positions and temporary positions. Processes for hiring need to be improved for both classifications. Temporary workers have been hired who have not been subjected to background checks. This has led to individuals with criminal backgrounds, including a person who was wearing a criminal offender “ankle bracelet” being hired to handle ballots. Favoritism and personal relationships have also been a factor in hiring and promotion decisions.

7.99 Recommendation: The CCBOE should confer with County Sheriff Gerald McFaul to determine the best way to conduct basic criminal background checks on all permanent and temporary CCBOE staff.

7.100 Finding: Fair accountability for employees and discipline for employee performance has sometimes been impaired by political party leaders' intercession. This partisan intrusion reduces the perception and actuality of even-handed performance

reviews and discipline, eroding the employees' sense of managerial fair play, and accountability to managers.

7.101 Finding: The benefits of having experienced staff dedicated to the mission of honest and swift results cannot be duplicated by hiring temporary employees from employment agencies at minimal wage rates. Executive Managers underestimated the value of experienced line staff and demeaned their contributions by restructuring the agency to place significant emphasis on allocating work to temporary hires.

The recruitment and hiring of temporary CCBOE employees occurs in a variety of ways. The major political parties or elected office holders have exercised significant influence. When the positions required largely unskilled labor, perhaps patronage was less of a problem. But most election administrative tasks in the current period require skill and conscientious dedication to achievement of quality performance. If a temporary worker enters voter registration information erroneously, a qualified voter loses the right to vote. If he enters provisional ballot information without care, a qualified voter's ballot will not be counted. If she fails to pack a polling place supply bag carefully, essential security seals or memory cards may not be included, causing a polling place to open late and turn away voters. If a poll worker does not understand what to do for disabled voters, some voters may be denied their voting rights.

7.102 Finding: Recruitment of election temporary staff has been split among a wide range of CCBOE offices, leading to fractured and competitive department relations, duplication and wasted staff resources, ineffective strategies, and other problems. Ohio law specifically accords certain limited roles to political parties in the staffing of polling places and in the CCBOE. [Interviews with managers; e.g., ORC §3501.22(A)]

7.103 Recommendation: Whether they are hiring for permanent or temporary positions the Board Members must put the best interest of the agency ahead of partisanship patronage. The CCBOE must move away from the historic view that temporary workers are patronage opportunities that place political party ahead of qualifications. Neither political parties nor the public at large is best served by staffing elections with individuals who cannot perform the tasks at the level required to conduct fair and honest elections. Partisan balance, where required by law, cannot be replaced by political patronage hiring.

7.104 Finding: For the most part, the fact that CCBOE employees are known by political affiliation (as an R, D or N) has not created alignments in the workplace that undermine the ability to work cooperatively. [Interviews with Managers and workers; our observations] While political party affiliation matters less in hiring, retention, and promotion decisions, it still plays a significant role. The agency has been the repository of patronage hiring from both parties. Sometimes this influence has led to high-quality employees, but other times it has resulted in deficient or marginal employees, whose presence erodes morale and quality performance within departments and the agency as a whole.[Interviews and observations; personnel records]

Because certain election tasks are required, by State statute or administrative Directive, to be undertaken with a representative of two different political parties, some hiring must take into account political party affiliation in order for the requisite employees to be available for these paired functions. While all employees are aware of this necessity, when an exceptionally qualified applicant is turned down in favor of a less qualified applicant of the other major party, further demoralization (about professionalizing the CCBOE and reducing patronage hiring) occurs in employee ranks. [Employee interviews]

7.105 Recommendation: This dual and sometimes contradictory personnel approach — sometimes merit-based and sometimes with political party trumping — has to be directly addressed. One solution is to identify how many permanent employee party pairings must be available (at both manager rank and line staff) to perform any task that is legally compelled to be conducted in pairs. Such an analysis must take into account vote tabulation, recounts, and all other tasks regardless of whether they are contingent (recounts) or routine (counting votes). So long as the CCBOE staffing partisan ratios dictated by this analysis have been met, then until and unless the required ratio is unsettled because of employee departures, the CCBOE should be hiring and promoting strictly on the basis of qualifications and merit-based criteria. If a job opening requires particular political affiliation (for instance, because the incumbent in the pairing is of one party and the new hire must be the other), the posting must mention this criterion.

7.106 Finding: Recruitment efforts to fill management and line staff positions have varied significantly depending on the position, the perceived urgency, and the degree of involvement Board Members and political party leaders have exercised. Not infrequently, interviews with a range of candidates have been feigned because a prejudgment of who will receive the job offer. Hiring with secret criteria, including a particular party affiliation, has sometimes caused the devaluing of professional skills and the knowledge base required for particular jobs. This practice can lead to outstanding prospects losing interest in CCBOE jobs. [Interviews with managers and line staff]

7.107 Recommendation: Even where hiring must occur to maintain political balance, broad recruitment within the state and nationally should be undertaken for every CCBOE position that requires any specialized skills — even if it is an hourly position. Party affiliation cannot substitute for or trump meeting the job's qualifications.

7.108 Recommendation: Recruitment efforts must be reopened if the skill set and other qualifications cannot be met. CCBOE employees and the public must understand that so long as partisan balance for certain functions remains in the Ohio statutes, this dichotomous approach to hiring must continue as a matter of law.

7.109 Recommendation: The CCBOE Board Members, and the Cuyahoga political party leaders should reach an agreement concerning their roles in CCBOE permanent and temporary employee hiring and personnel action decisions. The agreement should include such points as: commitment to refer only the most skilled, conscientious, and ethical persons to the CCBOE for employment; cooperating in the effort to improve employee

morale and performance, as by ceasing intercession to protect the jobs of CCBOE employees who have deficient performance as determined on fair and job-related measures; and supporting merit-based personnel decisions and a discipline system that will earn employee and public respect.

7.110 Finding: Nonpartisan and third party-affiliated citizens have complained of little interest in their applications for permanent and temporary CCBOE employment. The manner in which the state statutes are written do not accord the major parties the sole positions, even where employee pairs of differing parties are mandated. A great many Cuyahoga citizens, and highly qualified persons throughout the nation, are not strongly affiliated with one of the two major parties. [Ohio election law; voter registration and opinion polling results]

7.111 Recommendation: Even when hiring for ensuring requisite employees for political balance, the CCBOE should be extending the opportunities to those with third party affiliation or no political party affiliation.

7.112 Recommendation: Supplementation or replacement of skilled staff should be done by selecting the best qualified individuals vetted through a public process. Partisan balance — on the CCBOE Board and also in polling place staffing, which is required under Ohio election law — should not be confused with partisan patronage.

7.113 Finding: Questions were raised by both employees and managers concerning whether labor and employment laws (federal, state and local), were violated by the extreme overtime requirements on penalty of losing one's job, and by the restrictions on the use of accrued compensatory time. Additionally, questions were raised about the hiring of temporary workers, from temp agencies and via the Administrative Assistants, without background checks even though they were handling ballots. Other questions were raised about the CCBOE's compliance with Ohio statutory law in partisan balance required for certain types of functions. Administrator Platten was only aware of one set of questions — whether background checks were necessary — but neither she nor the Director had not taken the matter to the CCBOE's legal counsel for guidance. As the new Ballot Department Manager stated, "I don't feel that I know the legal requirements of my job, and my predecessor was indicted for not following the law." [Interviews with Director Vu, Baker, and Platten; with employees]

7.114 Recommendation: The new position of Ombudsperson Officer must be created as at least a part-time position. Ideally, the person will have practiced law in a regulatory area and will have some knowledge of federal and state election law, other relevant federal and state law that impacts the CCBOE's activities (including conflict of interest law; the Sunshine Laws; public contracting and procurement), county policies and procedures, federal and state labor and employment laws governing maximum hours, safety and health issues, and a variety of other topics. The public information officers should also be re-located to this office. The Ombudsperson must not only be able to research the answers to questions presented, but also advise the management on when authoritative legal direction must be sought from the Secretary of State or the Attorney

General, or other State or county offices. The Ombudsperson needs to know enough about these relevant laws that she/he can flag issues proactively and not merely reactively.

7.115 Finding: Temporary workers did not receive background checks to look for legal violations which would render them unqualified to work for the CCBOE on Election Day. They were deployed without proper supervision or training in critical areas, including unpacking supply bags to look for voted ballots and memory cards. [interviews with Platten, Director Vu; with managers) The time frame for hiring temporary workers, regardless of whether the workers were hired from the CCBOE's pool or from outside sources, was much too short. This is evidenced by a requirement that the Administrative Assistants obtain 100 workers in 24 hours or less. No real checks on employees can occur if the hiring period is so short. [AA Memo]

7.116 Recommendation: That the Board adopt a policy that states political parties and leaders are encouraged to nominate and refer individuals for both temporary and permanent positions, but that all hiring, promotion, and disciplinary matters will occur on the merits of the (prospective) employee only, with no role for these nominators. Thus, if a poll worker, nominated by a Ward Leader, fails to attend training or does not arrive to work at the appointed hour, the CCBOE will exclude the person from its employ. The Ward Leader should join with the public agreeing that performance is the first concern. The public interest to be served by election workers — both temporary and permanent — must become and remain paramount to all other considerations.

7.117 Recommendation: The CCBOE should confer with County Sheriff Gerald McFaul to determine the best way to conduct basic criminal background checks on all permanent and temporary CCBOE staff.

7.118 Recommendation: The Board's Administrative Assistants and others can continue to recruit, but they should forward names of applicants to a nonpartisan CCBOE office, where the processing and evaluation of all temporary and permanent hiring will occur. This office would not be the current HR office but, to demarcate the sharp shift in duties, should be renamed and restaffed: for instance, Workforce Recruitment. This office should:

- Create and update lists (or a bank) of interested and available temporary employees by posting requests for statements of interest, or active solicitations of temporary employees, on CCBOE and County websites, with area colleges and universities, and elsewhere.
- Require that to be included in the temporary worker registry, an applicant complete all application forms, submit to a background check, and complete all other pre-hiring steps. Applicants should provide a current email address and phone number, if available, and be asked to keep the CCBOE apprised of any changes in status or contact information.

- Periodically confirm availability, interest and contact information by email or phone, at least quarterly, to keep lists current.
- Ensure that applications contain such information as applicant skills and departments/tasks of interest.
- Develop and maintain lists of qualifications, and administer relevant skills tests for positions such as data entry; and hire only those persons who meet minimum objective standards.

The Office must generate creative approaches to develop a knowledgeable, dedicated, temporary expansion workforce and keep its registry/listing, contact/availability, and interest database current. Instruments for easy, quick and fair evaluation should be created by permanent staff managers. Where hiring requires political balance, the Administrative Assistants should be involved in selecting employees for the positions. Where political balance is not a factor, the AAs should not be involved. Alternatively, issue an RFP for a temporary employment agency to do background checks, and create and update the temporary worker registry.

7.119 Finding: Some department managers have requested that certain temporary employees not be returned to their departments, yet such workers still get reassigned to them.

7.120 Recommendation: A simple evaluation form needs to be created for managers to evaluate all temporary workers. If a manager does not want a person to return, those involved with placement decisions need to respect these determinations.

7.121 Finding: The CCBOE staff made extensive use of pooled staff and temporary staff to meet its mission to prepare for an election. Pooled staff members are individuals who are transferred between functions as warranted by the CCBOE's ever-changing needs. Unfortunately, prior to the last election, many employees did not receive sufficient training to deal with the many and varied tasks they would be asked to perform. The CCBOE also relied heavily on temporary staff, many of whom arrived at their job with little or no experience in working for a Board of Election. As a result the staff often looked confused and offered inaccurate or incomplete advice to the voters. [Staff interviews; direct reports from early voters; and independent observation]

7.122 Recommendation: Previously the CCBOE Board considered and dismissed the idea of hiring a Training Officer. A position description was prepared at that time which called for this individual to assess the training needs at the CCBOE (*see Appendix G*). The CCBOE Board should revisit this decision so that a Training Officer can be hired in a timely fashion and have a positive impact on staff readiness for the November election.

7.123 Recommendation: A position of Quality Manager should be created with tasks including: conducting a debriefing after each election, collecting and following up on data (Pink Sheets, incident reports, call center reports, and non-conformances) and

creating training programs to help mitigate problems. *Please see the Quality Assurance and Continuous Improvement proposal for more details, Appendix F.*

7.124 Finding: The CCBOE's online resources are out of date and poorly constructed. The website is currently not up to date, and the polling location finder does not function properly. The instructions on how to use the machines are available on the Secretary of State's website, but they are not available on the County site. The DRE demonstration dates also need to be updated. Other counties included links to sites such as the Secretary of State's website. The ballots available online do not display the entire ballot. Many of the ballots are cropped so that you can not view the races on the left hand side.

7.125 Recommendation: The website needs to be updated and corrected. More information should be included on the site and important information should be easy to view. Deadlines such as when to send in absentee ballots and dates associated to registration and the day of an election should also be made easy to recognize. The site should include instructions on how to use the voting machines. The site should include a link to the Secretary of State's website. An interactive voting program could also be created leading an online user through the electronic voting process.

Chapter VIII: Additional Concerns and Recommendations

A. The Board of the CCBOE

The CCBOE Board (“Board”) deals with a number of issues that require it to convene in Executive Session. These matters are specified by statute and have been further developed by judicial opinions. Personnel action matters, pending litigation, and a few other areas are barred from discussion in public on the record.

8.1 Finding: The Board’s exercise of its Executive Session duties has caused a great deal of public confusion and has imposed significant delays on the publicly conducted business. This has sometimes led to a perception that the Board is not respectful of citizens’ and candidates’ time, or is attempting to conceal its deliberations from public scrutiny.

8.2 Recommendation: The CCBOE Board should adopt several new procedures for creating and managing its Public Meeting Agenda:

1. That any Board agenda that includes an Executive Session include a notice written in publicly accessible language explaining that State law forbids the CCBOE Board from discussing certain matters in public [with a citation to the statute], and that Executive Sessions can begin only after a public call to order.
2. That Executive Session time be scheduled for the beginning or at the end of a Board meeting, with an agenda that notes this and which states the time the public session will commence. The CCBOE Board and its clerk should endeavor to estimate accurately the Executive Session time required. Under no circumstances should it begin a public session before the time stated in the Agenda, and it should seek not to delay the Public portions of its agenda.

8.3 Finding: The Board has adopted policies, for instance, a new policy governing recounts, that it did not first publish on its website for public comment. This practice of introducing a proposed policy for Board approval on the same day it is first announced publicly has led to the Board not receiving timely and useful suggestions for corrections and improvements to the proposed policies. The current approach also structurally continues the attitude that the public’s suggestions and insights are not valuable or desired. This leads to a perception of agency and Board arrogance that undermines the Board’s efficacy and public confidence.

8.4 Recommendation: All proposed internal policies, policy manuals, and decisions concerning election management, unless an emergency matter, should be posted on the website (and sent to an email list of those who indicate their interest) for advance public review and possible comment. The Board should cordially solicit public reactions and recommendations, with a request for submission within 15 days of posting so that the

managers can consider the responses. A CCBOE staffer should collect and summarize the public comment for presentation to managers and the Board with sufficient time for the managers to consider revising their policies in light of the comments. The Board should also post the summaries of comments it has received from the public well in advance of the public meeting to consider the proposed policies.

If the CCBOE commits to such postings at least 30 days before they appear on the Board's agenda, greater public involvement, especially from area experts and election advocacy groups can occur in writing and well before action is taken. For any policy that needs to be acted on quickly, the Board should classify it as an interim policy pending full discussion and finalization, and schedule the matter for an upcoming Agenda. The new Ombuds office should assist in developing these basic administrative process policies. This process will better balance CCBOE's need to develop new policies, its needs for greater public advice (free advice and insight) and disclosure, and its ability to move quickly when circumstances demand.

8.5 Finding: Although the Board has contracted for the services of a Court Reporter to record all Public Session meetings, for some reasons the Clerk has omitted placing an order for many of the transcripts. Thus, these crucial records are not available to the public, and the Board's record has large holes. The charge for an individual citizen to order the Transcript is often prohibitive. The transcripts are also not placed on the CCBOE website for broadest accessibility. [Interviews with the Board's Clerk; with the Board Admin. Assistants]

8.6 Finding: A great deal more information about the CCBOE and its Board's actions could be easily accessible to the public via the CCBOE website. Some of the information that citizens have requested to be posted on the web include:

- The Board's Meeting Schedule (including amendments and modifications), Agendas, and Summaries/Highlights of Board Action
- Transcripts of Board Meetings
- RFPs (Requests for proposal) of goods and services
- Major contracts for voting equipment and other items

[Interviews with Advocacy group representatives, with CCBOE staff]

8.7 Recommendation: Especially now, given that the Board needs to rebuild public confidence in its elections process and the entire agency, the Board should direct the Clerk to place a standing order for the Reporter to transcribe all of its Public Sessions (into an electronic or paper record). Until an agreement is negotiated that explicitly authorizes the CCBOE to post on its website all transcripts, a copy of all Board transcripts for the last four years should be placed in the files of the CCBOE Public Information officers for quick access for public records' requests. Additionally, the Board should seek, perhaps through a procurement process, a reporting vendor that will be cost-effective and that will agree to the terms of permitting the transcripts to be posted on the website for one year from the date of the recorded Public Session.

We believe that the Board should post these documents and any others that can help provide a window on the Board's handling of taxpayer dollars, and its pursuit of the public trust in elections.

8.8 Finding: As discussed in Chapter VII, Management and Personnel, the Deputy Director has requested that the Board Members not discuss their displeasure with managerial performance or otherwise “embarrass” the top managers in the Public Session of Board Meetings. The Board's practice of generally abiding by this request may be not only a violation of the Ohio Sunshine laws (an opinion on which should be requested from their legal counsel) but also impairs its ability to hold CCBOE top management accountable and responsive. By avoiding public discussions of managerial priorities and leadership within the CCBOE, the Board also loses one of the biggest “sticks” it has for compelling managers' responsiveness to their directions short of threatening a formal personnel action [Interviews with Director and Deputy Director; Board Members].

8.9 Recommendation: The Board should strictly adhere to the Sunshine laws and not enter Executive Session unless and only for the express purposes listed in the statutes and case law. The Board should seek legal guidance on interpreting and applying these statutes, but in ambiguous situations we urge erring on the side of full public disclosure. Especially now, when public trust and confidence must be rebuilt in the Board and the CCBOE's performance, every lawful step toward public accountability and fullest disclosure should be taken. By our lights, for instance, “personnel actions” do not include discussions of proposals for administrative restructuring of the CCBOE.

Additionally, it seems that the June 2006 Board discussion with top managers concerning their management decisions and omissions in preparing for the May 2nd election should have been conducted in public, on the record. The Board should instruct its legal counsel to be present at all Executive Sessions and scrupulously instruct the Board when it ventures off into matters that are properly, or arguably, part of the Public Record.

B. Candidate Relations

8.10 Finding: Candidates for public offices and their current employees often place a great deal on the line by their standing for election. But the CCBOE has not promptly advised candidates when unexpected obstacles arise in election management or tabulations that will lead to delays in reporting the unofficial results. For instance, when the absentee ballot scanners failed, and a hand-count procedure was authorized, the CCBOE did not notify candidates about the problem or give them information concerning its expected conclusion. [Euclid Hearing transcript, Director Vu interview]

8.11 Recommendation: The CCBOE should attempt to create an email list of contact persons for all candidates and issues on the county's ballot well in advance of the election. This information can be collected on a form that is a part of the CVS petition-filing packet. A “list-serve” created for all contacts (one contact per candidate/issue) in advance of Election Day would permit the CCBOE to promptly notify those most directly

affected by any election management problem. Even if a problem affects only a portion of the list-serve, for instance, candidates in Euclid, the message can clarify that fact without requiring the creation of multiple list-serves.

C. Election Advocacy Organizations

8.12 Finding: Over the past three years, a number of election “watchdog” organizations have identified many problems in the CCBOE’s conduct of elections, and have offered a range of recommendations for its improvement. The CCBOE has too often responded to these evaluative comments with an administrative attitude of disinterest and disdain. Even where the CCBOE Board has instructed the top managers to respond to the critiques and recommendations, executive managers have rarely responded on the record at succeeding Board meetings. Additionally, the organizations have found executive managers relatively unconcerned about even relatively grave matters (e.g. glitches in DIMS software) and generally not offering any internal investigation, correction, or public report. Public confidence and respect for the CCBOE has suffered greatly under current CCBOE management.

8.13 Recommendation: The Board should create the position of Ombudsperson, with the officer charged to report to the Board, the Director, and to the Public. Duties shall include following up internally and externally on questions and concerns raised by members of the public and watchdog organizations. A standard of reasonableness is contemplated, so that a range of concerns can be addressed — not simply those of one organization. Other suggestions about this new office are detailed in the Management and Personnel section.

8.14 Finding: Some watchdog organizations have submitted excessively burdensome information requests. At times, public information staff have become virtual research assistants for these organizations. The organizational leaders have suggested that the numerous and burdensome requests are in part spawned by the form in which the CCBOE has been publishing its election data; they have argued without CCBOE response that presenting the data in other ways and via other databases would greatly reduce the numbers of information requests they file and the burden on the public information staff.

8.15 Recommendation: Lead researchers from the Greater Cleveland Voter Coalition, Ohio Vigilance, and others which have filed numerous information requests should meet with the Information Services Managers to discuss and resolve database and data access issues. The watchdog groups and the CCBOE should strive to reach a resolution that will yield the CCBOE placing more information in the public domain (e.g. on its website) and in a form that permits social scientists to analyze it without the use of the CCBOE staff energies. The election watchdog organizations and CCBOE staff should seek to establish a cooperative working relationship for full and effective disclosure to the public, and hostility on both sides must end. The advocacy organizations and staff should endeavor to become allies dedicated to achieving the goal of the CCBOE becoming a beacon for the State and Nation in election accountability.

D. Independent Monitor for CCBOE Response and Implementation

8:16 Finding: The CCBOE Board Members requested that this Panel consider and make suggestions concerning a monitoring mechanism that would help to ensure that this Investigation, and the ultimate recommendations and action plan the CCBOE adopts, is implemented swiftly.

8:17 Recommendation:

- That an independent entity (that does not receive funding from Cuyahoga County or the CCBOE, and does not have a contractor or vendor relationship with them) be appointed as Monitor;
- That the Board of the CCBOE consult with the Cuyahoga County Commissioners and try to reach consensus on the entity to be appointed to serve as Monitor;
- That the CCBOE (and County Commissioners) request that independent funding sources, such as foundations, provide sufficient support for the Monitor to do high quality work;
- That the entity have staff with substantial elections administration expertise;
- That the Monitor provide at least monthly written reports to the CCBOE, the Board of County Commissioners and to the public concerning the progress that has been made in the CCBOE on the action plan, and that the Monitor be available for oral reports when the Board requests;
- That the details and exact charge to the Monitor be created jointly by the CCBOE Board, the Board of the County Commissioners, the funding entities, and the entity that is selected to be Monitor, with public comment on the initial proposal before it is finalized by the CCBOE Board, all acting with great speed;
- That a two-year commitment be requested of the Monitor and the funding sources.

Chapter IX: Background Materials, Summaries and Analyses

A. Overview of Testimony Presented by Concerned Cuyahoga County Citizens in Public Hearings

Congresswoman Stephanie Tubbs Jones held five Public Hearings in Cuyahoga County to gather the testimony of individuals and advocacy organization spokespeople regarding the May 2006 primary.

The dates and locations were:

- May 22, 2006: Beachwood
- May 30, 2006: Euclid,
- May 31, 2006: Cleveland,
- June 1, 2006: Bedford,
- June 2, 2006: East Cleveland.

In addition to the Stephanie Tubbs Jones hearings, a Public Hearing was held for the advocacy groups on 5/31/2006. The final Public Hearing was held at Cleveland State University on 6/9/2006.

Problems with the DESI TSx voting machines

9.1 Citizen Impressions: Cuyahoga County citizens mentioned that there were several problems with the voting machines. For example, the machines jammed, froze, crashed and ceased to function entirely. Poll workers also indicated that the machines were difficult to set up and close down. The poll workers had problems starting the machines and running them throughout the day. The machine malfunctions created an overall lack of certainty that the machines had the capacity to effectively act as vote tabulators. Additionally, the problems experienced left the impression that machine tampering was a distinct possibility.

9.2 Citizen Suggestions: An attendee at the Beachwood hearing suggested that the machines be tagged as a two person set-up.

9.3 Citizen Impressions: Overall, the voters seemed to like the machines. One benefit listed at the Cleveland hearing was that “the screens display was comfortable and clear and an ease to operate.” Furthermore, persons with disabilities, such as blindness, reported being happy to have been able to participate independently in the election for the first time.

9.4 Citizen Impressions: Poll workers experienced problems with the printers and five people described the printers as a “mechanical mess.” They found the printer tape was

difficult to install and the printer would jammed repeatedly and it was hard to read what the printer recorded.

9.5 Citizen Impressions: Although assistance from DESI had been promised, they didn't always act on the promise. There were complaints about the DESI assistance at the Cleveland State hearing. The people from DESI either did not have the competency to assist poll workers or they never arrived on the scene.

Training of Booth Officials requires restructuring

9.6 Citizen Impressions: There were 42 concerns expressed regarding the effectiveness of the training given to Booth Officials. The trainings were described as long and with too much information given at once. Additionally, the trainings overly focused on some areas and ignored others. For example, Ms. Flasig stated at the Bedford hearing, "They were so interested in telling us how to put the machine together; they didn't tell what we had to do afterwards."

Poll workers expressed other concerns about the lack of material covered in training which in turn compromised the effectiveness of polling places on Election Day. One person stated that they had not been taught about the procedure for giving provisional ballots to voters. Mr. Capko, a poll worker, said, "[for the] provisional vote, [they spent] maybe five or ten minutes [in training]." At the Beachwood hearing, one person described the training as ineffective for preparing poll workers for Election Day. He said, "Well, let me tell you, it's like Driver's Education. You see movies, you read a book, but once you get behind the wheel of that car, it's a different ball game, starting with when we opened the polls."

9.7 Citizen Impressions: The training sessions were overcrowded and not conducive for training. There were too many people per training session and too many people per machine during the training session. Further, many people walked in late and were not present for the entire training session, which in turn compromised the effectiveness of the instruction.

9.8 Citizen Suggestions: Offer compensation for training sessions. Paying individuals for the time they spend in the training session would motivate people to attend the scheduled trainings in their entirety.

9.9 Citizen Suggestions: Provide more machines at the trainings. More machines would allow a greater hands-on approach for instructing poll workers. One person stated at the Beachwood hearing, "I think had the instructor not had so many people in that class, if it had been half that, say maximum 15, it could have been done well. And, I think if they do in the future it will work much better."

9.10 Citizen Suggestions: A consistent recommendation given at the hearings was to invest more time in training Booth Officials and EDTs. Many people expressed uneasiness about working with the new technology after just one training session. Some

people attended more than the one training session in order to be ready for Election Day. They testified that the additional training hours were extremely helpful in shaping their understanding of the new Election Day process.

9.11 Citizen Impressions: The training sessions were described as inconsistent and scheduled too far in advance of the Election. One person at the Bedford hearing said that “the other Judges didn’t remember how to do anything with the new machines because the last time they were trained was too far away from the actual election and they forgot how to do most things.”

9.12 Citizen Impressions: Trainers did not demonstrate professional behavior. Two people at the Cleveland State University Forum hearing stated that the trainers argued with each other. One trainer was reported to have made an inappropriate “comment” about the men in the room.

9.13 Citizen Impressions: Many Election Day Technicians did not behave in a professional manner. For example, one complaint at the Bedford hearing was that “the EDT reeked like alcohol when he walked in at 5:30 a.m. I have reported inspectors reeking of alcohol for years. Throughout the day he was just sitting in his chair and when a problem occurred he said to look in the hand book.” It was also reported that a few EDTs were found asleep in their chairs and unresponsive to requests for help.

9.14 Citizen Impressions: Eleven attendees indicated that the lack of privacy offered by the DESI machine design was a great concern to the voters. At the Beachwood hearing, someone stated that “the machines were set up in an arc, so you could see everyone else’s [voting screen].”

9.15 Citizen Suggestions: The voters at the Public Hearing recommended that the machines be set up so that they do not face the awaiting voters to assure privacy.

Training materials given to poll workers need to be consistent

9.16 Citizen Impressions: The directions in the training manual were inconsistent with the directions in the other training sources, including the DVD and training session. At the Bedford hearing, Ms. Aldridge said, “I went home and read the book. I watched the video, and I knew I was in deep trouble.” Additionally, the manuals were described as wordy and technical, and the instructions for set-up were described as “daunting.” One person was outraged that she received the 5th edition and it still had mistakes. She did not receive the final edition (6th edition) until Election Day. To fix mistakes, the CCBOE stapled correction pages into the manual. There were 11 problems expressed concerning the training manuals. At the Bedford hearing, Mr. Sawastuk stated, “When you look at this book, and you go through all these pages, just looking at that book will blow your mind.”

9.17 Citizen Suggestions: Booth workers need to receive their manuals earlier in order to familiarize themselves with the materials and reference format. This would make troubleshooting easier on Election Day.

9.18 Citizen Suggestions: The training manuals should have more detailed instruction. The manuals should be written or at least reviewed by those instructing the training sessions. This approach would assist in creating continuity between the written material and the training session.

Booth Officials and EDTs were reported to be ill-prepared to complete their charge

9.19 Citizen Impressions: Many EDTs did not show up at the polling place, and others were not well trained for their position. At the Bedford hearing, Ms. Aldridge expressed concern about an EDT not appearing. “We were promised help from the Election Board that an EDT would be with us Monday night. We needed help then, nobody came. We called, nobody came. The same thing happened on Tuesday. They promised we would have an EDT there. We had problems.”

At the Beachwood hearing, another Booth Official said, “We had a technician who knew nothing. He talked on the phone all day, he went out in his car most of the time. He did nothing, nothing constructive for any of us, and it upset us knowing that he was getting paid twice as much as we were and he absolutely knew nothing.”

9.20 Citizen Impressions: The CCBOE did not inform some roving EDTs of their assignments, so they were not equipped with automobiles to fulfill their duty. Hearing attendees reported that those EDTs spent the day sitting around and getting paid.

9.21 Citizen Impressions: Both Booth Officials and EDTs were not well trained for their positions. They did not know the procedures to follow when something did not work, and the EDTs could not fix or troubleshoot the machines.

9.22 Citizen Suggestions: Poll workers must pass a test to determine if they have the ability to perform on Election Day.

9.23 Citizen Suggestions: Provide Presiding Judges clearer instructions for polling location set up and clearly defined roles of all poll workers.

9.24 Citizen Impressions: In some situations, the younger and older poll workers distrusted each other. Younger poll workers described their elder counterparts as being “too old” to do their job. One poll worker stated, “the older people did not seem to know what they were doing and didn’t trust the younger people at all.”

9.25 Citizen Impressions: Poll workers themselves felt that they were under trained and unable to handle their duties. One Presiding Judge at the Bedford hearing was so frustrated with working the polls last spring, he stated “I am very seriously considering

not working again. And I've worked a good many years, but they have to do some corrections to make it simpler for those people that are not real computer savvy."

9.26 Citizen Impressions: Poll worker attendance was poor. Some of the Judges were missing from their posts at various times during Election Day and others were reported to have simply walked out. One person in Cleveland said that she believed "it was a crime for a poll worker to quit on Election Day". Lack of attendance in part was attributed to the pay offered for the long hours assigned. At the Beachwood hearings, Mr. Cargle said that "the biggest problem is getting people to work because of the pay and long hours." In addition, two others testified that they felt that the hours were too long.

9.27 Citizen Suggestions: Create a procedure for confirming poll worker participation in advance of Election Day. One citizen said, "A very simple procedure to make sure people are going to show up or know who is going to show up is to do what doctors and dentists do, call all these people 24 hours or 48 hours before and find out if they're ill or find out if they don't want any part of it so we know who is there."

High School students were an asset at polling locations

9.28 Citizen Impressions: Fourteen poll workers complimented the high school student workers on their performance at the polling locations.

9.29 Citizen Suggestions: Greater utilization of high school students in the election process will benefit the voters of Cuyahoga County. The CCBOE should take greater advantage of having the high school students working the polls. One person stated, "The students are very good though. You know that the voters love them." At the Beachwood hearing, it was said, "The senior student from Beachwood High School was great," and "the best thing you have going for you for the November election are the students."

Responsiveness of the CCBOE was delayed or non-existent on Election Day

9.30 Citizen Impressions: Calls to the CCBOE did not produce necessary support. There were five reported instances where a person called the CCBOE because they were missing a Judge or a tech, but they were not sent a replacement. There were also five comments that someone tried to call the CCBOE and could not get through on the phone.

9.31 Citizen Impressions: The CCBOE employees were described as rude. Mr. Flasig at the Bedford hearings described his experience. "I called the Board of Elections and this man said to me, 'you mean to tell me there are eight people working there, two precincts and none of you know what to do.' And I had said, 'no.' And he was very nasty. I won't say what he said, but he was very nasty, and I hung up." The CCBOE gave out the wrong information — even the phone numbers to call with concerns were wrong. One person expressed concern that the CCBOE did not give out the correct information regarding absentee voting. In addition, the CCBOE did not offer assistance or visit some of the

polling places. One person testified at the Bedford hearings that “the Board is not responsive to the issues.”

9.32 Citizen Suggestions: The CCBOE needs to implement better procedures to have an organized Election Day. One person at the Cleveland hearing stated that “this is bigger than the machines, it’s about the management and how things are going down at the Board of Elections on East 30th, and we have to fix this problem.” To be more organized, the CCBOE should have more workers and increased phones for questions on Election Day.

Candidates were not told that the vote tabulation would take longer than expected

9.33 Citizen Impressions: The CCBOE did not inform candidates of the process and the length of time for counting and certifying the votes with the new technology. The experience was described by one person in Cleveland as being the “biggest let down” because “for the first time that I can remember being at the Election Board that night I left around 3:00 in the morning with no results. That was very frustrating.”

Elected officials were asked to stay away from polling locations on Election Day

9.34 Citizen Impressions: Elected officials voiced concerns about a letter that they received asking them to not visit the polling places. Mayor Pocek of Bedford stated, “I voted the day before absentee, because I received a letter from the Board of Elections saying that as an elected official I should not interfere in any way, shape, or form with the voting process; not even getting a cup of coffee or assisting anybody at a voting location. I really resented that, because there was definitely some need of help that day and I would have just tried to assist them in any way, to make calls or whatever.”

Polling locations that did not open in time had compounded problems

9.35 Citizen Impressions: As a result of the late opening, the lines at the polling places were long and many citizens were unable to vote.

9.36 Citizen Impressions: Many buildings designated as polling locations were not available for set-up the night before Election Day. At the Cleveland hearings, one person said, “We couldn’t even get in the building because the custodian, since it’s a school and he didn’t come until he felt like coming Monday night.”

9.37 Citizen Impressions: There was a great deal of concern about how the polling places were chosen. The poll workers reported that some polling places lacked parking, power outlets, and handicap access.

Ballots lacked some candidates' names

9.38 Citizen Impressions: There were several complaints about names not being on the ballot. At the Cleveland hearing, one person testified that “some precinct committee persons who were supposed to be on the ballot, their names were not on the ballot.” Another person stated, “there was one of your precinct committee people voted along with their parents [on] absentee ballots. In the final tally there were no absentee ballots listed after her name.”

November's election will require greater emphasis on voter education

9.39 Citizen Impressions: Citizens are concerned that voters will not have the proper identification to vote in November. Further, advocacy groups have stated their concerns regarding voter registration and the notification to voters and registration groups that someone has been successfully registered to vote.

9.40 Citizen Impressions: A number of voters do not know how to use the machines. It was said at the Cleveland hearing that “voters had little knowledge as to what to expect from the machines since this was the first time they had used them.” Further, at a scheduled voter training session it was reported that the CCBOE set-up the machines incorrectly.

9.41 Citizen Suggestions: It was the opinion of two individuals who testified at the hearings that the CCBOE should set up more practice machines to familiarize voters with the new system. While The League of Women Voters attempted to conduct such sessions, the CCBOE should offer this opportunity at polling places prior to voting.

B. Overview of Telephone Surveys

Panel staff conducted two rounds of poll worker interviews to further identify and clarify problems that occurred on Election Day. The first phase of telephone interviews took a sample of three polling places (Woodbury, Savior, Garden Valley) where serious problems were reported to have occurred on May 2nd. Panel staff contacted all Judges, EDTs from these locations; thirteen workers that staffed these locations were also interviewed to establish the nature of the problems experienced on Election Day.

In the second phase of this process, Panel staff identified other problem polling locations based on the information ascertained by pink memo sheets, Public Hearing reports, focus groups, and phone calls or emails sent by poll workers to the panel. Forty-eight poll workers from these locations were contacted and interviewed.

9.42 Poll Worker Impressions: The phone calls with the poll workers revealed numerous problems. The most frequently reported problems included insufficient training; broken machines, inaccuracies in the poll book, late or very slow opening due to problems setting up the machines, and printers jamming due to installation problems.

9.43 Poll Worker Impressions: Booth Officials reported mixed feeling in regards to the performance of Election Day Technicians (EDTs). While many felt the EDTs were useless, other Booth Officials reported that EDTs were very helpful.

One Booth Official reported that their EDT had only received a single day of training the day before the election and did not have specialized technical knowledge. However, other Booth Officials indicated that they had problems at the polls until EDTs arrived. Booth Officials reported confusion over the role of the EDT; one Booth Official repeatedly referred to the EDT as “the person in charge of the polling place.”

9.44 Poll Worker Impressions: Poll workers reported that the voters liked the machines. However, phone interviews also revealed that many of the voters had concerns over the issue of privacy with the new machines. The machines had been placed too close together in many locations and poll workers received complaints that other voters could see how they were voting. Voters also repeatedly expressed confusion over whether or not they were supposed to receive a printed receipt of their ballots.

9.45 Poll Worker Impressions: Poll workers were not given enough supplies for their charge. Supplies reported as inadequate or missing included: “I Voted” stickers, broken machines, security seals, and memory cards.

9.46 Poll Worker Impressions: Poll workers indicated that response times by the CCBOE was too slow. Requests made for extra supplies and for EDTs were not quickly responded to.

9.47 Poll Worker Impressions: Not all problems were a result of poor planning or lack of attention by the CCBOE. A few large problems seemed to be caused by unforeseen events such as electricity loss.

9.48 Poll Worker Impressions: Positive opinions were expressed about the extra training that was offered. However, many poll workers indicated that they would be reluctant to work again, unless better and more extensive training was provided.

9.49 Poll Worker Impressions: Poll workers also stated that student poll workers were greatly appreciated and a big help.

9.50 Poll Worker Suggestions: Suggestions generated to improve the Election Day process included:

- increased training time and number of sessions,
- smaller classes during training,
- training should coincide with what is in the manual,
- training should focus more on closing the machine,
- there should be more time devoted to troubleshooting issues during training.

C. Overview of Poll Worker Focus Groups

Three focus groups were held by the Cuyahoga Election Review Panel to further establish the problems experienced on May 2nd and to offer suggestions for promoting an effective and efficient Election Day in November.

The methodology used for selecting focus group participants was to take a sample of Booth Officials and Election Day Technicians that had been flagged based on the feedback they provided in the Pink Sheets, the Stephanie Tubbs Jones Public Hearings, individuals who have expressed their frustrations to the CCBOE and additional randomly selected poll workers from across Cuyahoga County. With this sample, the Cuyahoga Election Review Panel was able to identify ways to draw poll workers back into the system and to generate suggestions on how to create a better Election Day in November.

Topics for discussion covered the new technology used on Election Day, poll worker training sessions and general improvements for the system. There were three focus groups which were held between June 24 and June 29 at Beachwood Library, Eastman Library and Cleveland State University.

The first focus group was held at Beachwood County Library on June 24, and was attended by fourteen poll workers. This group was facilitated by Kathy Hexter and led by Karen Grachu. The second focus group took place on June 27th at the Eastman Library, attended by eleven poll workers, facilitated by Abby Horn and led by Mark Bennett. The final focus group meeting was held at Cleveland State University Law Building on June 29, attended by eleven poll workers, facilitated by Rommel Upshur and led by Leslie Huff.

Poll worker training was insufficient

9.51 Poll Worker Impressions: Trainers spent too much time concentrating on how to set up the machines and not enough time on how to accumulate the cards. As a result poll workers did not have the competencies necessary to perform this function.

9.52 Poll Worker Suggestions: The accumulation should not be done at the polling location. Instead everything should be sent down to the CCBOE for accumulation. This process would ensure that someone who was properly trained in accumulation would be performing this task and also would help to eliminate the possibility of lost memory cards. Further, this would allow training sessions to allot enough time to instruct poll workers on machine set-up.

9.53 Poll Worker Suggestions: All training material must have consistency. This includes the instructions given in the manual, training sessions, DVD and the machines. There also needs to be a guide to help with the trouble shooting. A suggestion was to have a cheat sheet with a list of major problems and the way to solve those problems. According to one of the poll workers, the Top 10 List was a great asset, however not

everyone received it. This needs to be provided to all the precincts to help poll workers with trouble-shooting problems.

9.54 Poll Worker Impressions: Many of the poll workers are uninformed about election law.

9.55 Poll Worker Suggestions: There should be a section in the manual that provides them with relevant Election Law components including how many democrats and republicans must be present at the polling place and what the restrictions in helping a disabled person are. Providing this information would help the poll workers make decisions based on what is fact rather than what they think is fact.

9.56 Poll Worker Impressions: Many poll workers did not receive the full five hours of training. For example, one of the EDTs who was present stated that a half-hour after the training session had already started people were still coming in and the trainer allowed them to continue to stay for the rest of training session. The trainer should have not allowed those who walked in late to the training session to stay and the trainers should have made the late trainees go to another training session.

9.57 Poll Worker Impressions: The training sessions are too large to ensure that poll workers receive the proper instruction necessary to man the polling locations.

9.58 Poll Worker Suggestions: Trainings should be planned to be more hands on with a smaller number of people attending. Training in smaller groups would allow poll workers to have more one on one instruction with the trainers.

9.59 Poll Worker Impressions: The poll workers are willing to come back to work at the polls because many of them believe it is their civic duty and they like the people at their polling locations. However, though many of these dedicated workers have worked at the polls for many years, they will not come back if things do not change.

9.60 Poll Worker Impressions: Training sessions did not teach poll workers that every precinct was assigned a specific machine based on serial numbers. According to one Presiding Judge, a trainer instructed poll workers to allow any voter to use any machine.

9.61 Poll Worker Impressions: According to the poll workers they observed the use of machine during the trainings but did not have enough time to practice on the machines, which made many uncomfortable and led to many people quitting or not showing up on to work at the polls on May 2nd.

9.62 Poll Worker Suggestions: The poll workers also have to have the proper materials in order to do their jobs; Training Manuals, DVDs and machines need to match. This would lead to less confusion and a better guide for the poll workers to use.

Election Day polling place problems were often the result of poor planning

9.63 Poll Worker Impressions: Many of the poll workers were missing equipment or found they needed more equipment than was allotted to their polling location. The equipment missing included but was not limited to locks, memory cards, tape, and other supplies for the election to function properly.

9.64 Poll Worker Suggestions: Poll workers need to be provided with the proper equipment. For example, many poll workers did not have enough seals as the seals kept breaking. There either needs to be more seals provided or the CCBOE needs to use seals that are not as breakable.

DESI did not provide on-site staff with expert knowledge of voting machines

9.65 Poll Worker Impressions: Many poll workers were told that there was going to be a DESI person on site at each polling location to assist with machines. However, it was reported that there was no one from DESI present for most of the day if at all. In addition, many of the people from DESI reportedly knew less or the same amount as some EDTs.

9.66 Poll Worker Suggestions: If the CCBOE is going to have people from DESI in attendance to assist at polling locations, DESI employees need to be knowledgeable in how the machines work. This would require DESI to have a pool of trained employees available for support who had expertise above and beyond what was imparted at the poll worker training sessions.

There was a great deal of confusion as to the roles and tasks assigned to poll workers

9.67 Poll Worker Impressions: There was significant role confusion. Many EDTs were told that they were in charge and others were told that the Presiding Judge was in charge. This led to great confusion and conflict between the poll workers. It needs to be made clear to the poll workers which tasks there are to be performing based on their job title.

According to the EDTs participating in the focus groups, the instruction given was to simply support the Judges and that the Judges would know how to do their jobs. However, many of the Judges were told that they would not have to touch the computers and all they had to do was sign people in. This enraged many of the poll workers because they felt as though they were being deceived by the CCBOE.

9.68 Poll Worker Suggestions: There need to be clearly defined roles and subsequent competencies for all individuals working as poll workers and EDTs.

9.69 Poll Worker Suggestions: The list of tasks for the EDTs needs to be prioritized. According to an EDT and a Presiding Judge, the EDTs have a list, but it focuses on details such as putting out the flags and the no smoking signs. This resulted in a focus on

extraneous tasks rather than concentrating on primary functions like putting up the machines in time.

9.70 Poll Worker Suggestions: Providing EDTs with a check-list that identifies priorities would help to ensure that the poll location is ready to open on time. Again, clear definition of the functions and responsibilities of EDTs and Booth Officials must be delineated so that polling places can operate smoothly.

The new technology requires more time for polling location set up and break down

9.71 Poll Worker Impressions: There is not enough time in the morning to get all the work that needs to be done. According to a poll worker, the new system was great but took more time to set up. "We are putting in extra 3 hours in setting up the new machines."

9.72 Poll Worker Suggestions: Allow the workers to do more of the set up the night before. For example, one of the EDTs suggested allowing them to set up all the way to step 4.2 in the manual and then have them run a report and check the seals in the morning to ensure that no one tampered with them during the night. This would help greatly with getting the polls opened in the morning and on time. Also, allowing more set up on the eve of the Election will also allow poll workers to identify machine problems at an earlier time.

9.73 Poll Worker Suggestions: Designate a team of people whose primary function is to facilitate the set up and the break down of voting machines. This would eliminate a lot of the stress that is placed on the Booth Officials.

9.74 Poll Worker Suggestions: Have a zone station open the night before. This way the poll workers can call the zone and inform them what they are missing in order to receive their equipment that evening before polls open. This would mean that all the polling locations would be able to solve many of the problems which they had on Tuesday morning. A suggested change was to have one person be the contact point. Another suggestion was to have the EDTs be the contact person because the Presiding Judges need to take care of the voters.

9.75 Poll Worker Suggestions: Have a crew that comes in just to setup and take down. This would eliminate the issue of poll workers not knowing how to setup and take down. It also ensures that people who are specifically trained in these procedures are doing the process correctly. A majority of the focus group liked this idea because then they cannot be blamed if something goes wrong with the setup and the accumulation of the machines. This would also help to hold one group accountable if problem arise.

9.76 Poll Worker Suggestions: There is a need for some kind of order to packing up the bag instead of just throwing everything at the end of the night into the red or blue bags. An EDT suggested having every object color coded, and having corresponding color-

coded compartments designated specifically for each object. This would help to ensure that nothing gets lost at the end of the night and would lead to less confusion during closing procedures.

9.77 Poll Worker Suggestions: Designate more regional pick up and drop off locations. Many people reported that they had to drive much too far to drop off the bags at the end of the night.

Effective communication between the polling locations and CCBOE was deficient

9.78 Poll Worker Impressions: EDTs and Booth Officials experienced great difficulty in getting through to the zone stations and the CCBOE for support and assistance.

9.79 Poll Worker Suggestions: Have more phone lines to both the CCBOE and the zones. Also everyone has to have the right phone numbers to both the CCBOE and the zones.

9.80 Poll Worker Suggestions: Poll workers felt that all CCBOE employees and Board Members should be trained in machine handling. With widespread knowledge of the system, everyone would have the capacity to answer basic poll worker questions without transferring and make them call another number. This would help to eliminate the time that the poll workers spend on the phone. Another suggestion was to have more zones. This would help with the amount phone calls one zone receives. It would also help get the supplies and support out quicker, meaning that machines would be down for a shorter period of time and creates less time the Judges and EDTs have to spend on the phone.

Engaging poll workers for future civic participation

9.81 Poll Worker Impressions: The majority of focus group participants agreed that the high school students were a great asset at the polling locations.

9.82 Poll Worker Suggestions: A suggestion to getting new people was to have an ad campaign showing that not every one who works at the polls are senior citizens. However, the CCBOE needs to make sure that older poll workers do not feel as though they are being pushed out of the system. The CCBOE needs to make them feel as though their experience of working at the polls is needed and valued. Many of the poll workers stated that they would give it one more try and if the system does not improve then they will not come back.

9.83 Poll Worker Suggestions: In order to have a pool of poll workers for November a suggestion was to have an advertising campaign to encourage people to work at the polls. The CCBOE needs to put forth a campaign that portrays itself in a better light. This would help with the recruitment of poll workers. According to an EDT, the CCBOE needs to work with employers to encourage them to give their employees a day off to help at the polls. People should not penalize for working at the polls on Election Day.

Also, there needs to be political balance at the precincts. A suggestion to solve this was to do recruiting to a targeted group.

9.84 Poll Worker Suggestions: Many of the poll workers feel as though the CCBOE has solely blamed them for the problems on May 2nd. In order to eliminate this perception, there needs to a very public apology to the poll workers for the negative way the CCBOE has portrayed the poll workers in the media. This would also help with the retention of workers.

9.85 Poll Worker Impressions: In order to retain poll workers, the CCBOE needs to give greater attention to providing effective training.

Need for increased voter education

9.86 Poll Worker Impressions: Poll workers worry about the lack of voter education as it affects the elderly. In regards to the voter education, one of the Presiding Judges mentioned that the turn out of senior citizens was very low compared to in the years past.

9.87 Poll Worker Suggestions: More advertising be done to show how easy it is to the machines. Also it needs to be stressed that the ballot is backed up three ways: paper trail, memory card, and hard drive. It also needs to be conveyed to the people that they will not receive a print out of their ballot. The voters need to be educated to how to properly place their vote. This would help to limit the problems at the polling locations.

D. Analysis of May 2, 2006 Poll Worker Incident Reports and Election Day Technician Logs

Incident Reports, or “Pink Sheets,” are the primary mechanism by which the CCBOE tracks problems reported by poll workers, Panel staff conducted an analysis of 1,260 Incident Reports and 179 Election Day Technician (EDT) Logs from the 5/2/2006 Primary Election. *See Appendix J.*

All precincts are supposed to document the range of possible problems experienced during Election Day on an Incident Report, and each poll worker and Presiding Judge is required to sign the resulting report. As such, the Pink Sheets can be the most comprehensive tool we have available to analyze the functioning of polls on Election Day.

Using Pink Sheets as the primary source of information on Election Day problems limited the CCBOE’s awareness of all of the issues at the polling locations. For example, the CCBOE only found 1,260 of 1,434 total Incident Reports. Many of these Pink Sheets were incomplete or blank. A number of these reports were turned in without the signature of the Booth Officials. As a result some precincts that may have experienced poll worker and EDT absences, mechanical failure, poor training, and inadequate supplies for Election Day may not have fully documented deficiencies. Those precincts with serious reported problems, such as failures to open the polls on time and long lines at the polls,

neglected to include opening times or average wait times. Often poll workers did not include whether or not an absent poll worker or EDT arrived or was replaced, whether a broken DRE or printer was repaired, or what steps were taken to remedy a problem.

Training of poll workers requires restructuring and curriculum development

9.88 Poll Worker Impressions: Poll workers and EDTs felt they had inadequate/insufficient training related to the installation, troubleshooting, and closing down of DREs and printers.

9.89 Poll Worker Impressions: Training classes were described as too large and disorganized. Often in a large class setting older poll workers reported difficulty seeing and/or hearing what was going on.

9.90 Poll Worker Impressions: Poll workers who attended two or more training classes felt that they were better prepared to work on Election Day but were still unclear on many processes and procedures.

9.91 Poll Worker Impressions: Those who conducted trainings were poorly trained.

9.92 Poll Worker Impressions: Training materials were confusing, contradictory and unclear. When poll workers attempted to refer to the materials on Election Day, they discovered that the manual did not correspond to the screens and were unsure how to proceed.

9.93 Poll Worker Impressions: Inadequate/insufficient training of poll workers related to paperwork and election procedures. Many poll workers observed that training sessions focused so much on DRE training that election processes and paperwork were not adequately discussed. Poll workers were unsure how to fill out ballots for 17-year olds, notice of death cards, optical scan ballots, and provisional ballots. For example, when some polling places were unable to open on time, voters were turned away rather than offered optical scan ballots. Some poll workers noted that in circumstances when a provisional ballot should have been offered (when a registered voter was not and should have been listed in the alphabetical poll book or a voter on the absentee list did not receive an absentee ballot) an optical scan ballot was offered instead. Poll workers were also unclear how to proceed with independent, issues-only voters. In one phone interview, a poll worker reported that she was “relieved” that voters did not need optical scan ballots, because there was no training about how to use them.

9.94 Poll Worker Suggestions: Hold smaller training classes and separate training for DREs from training for paper work and voter procedures. Further, sessions should have in-depth training on provisional ballots and optical scan processing and when each should be offered to voters.

9.95 Poll Worker Suggestions: Test poll workers after training to ensure that they are adequately prepared for Election Day

9.96 Poll Worker Suggestions: Ensure that training materials are consistent and that the materials correspond correctly to the DRE s.

Polling places could not open on time

9.97 Poll Worker Impressions: Polls were often late to open for any of the following reasons: poor training of the poll workers on setting up DREs, absent/late poll workers and EDTs, inadequate supplies and broken or malfunctioning DREs/printers. In some instances, poll workers were unable to enter the polling facility on time on Monday night or Tuesday morning, because the facilities were locked or inaccessible.

9.98 Poll Worker Impressions: Poll workers were often at their polling locations long past the close of the election for any of the following reasons: poor training on the accumulation process, absent Booth Officials and EDTs, and malfunctioning DREs/printers.

9.99 Poll Worker Suggestions: Higher quality of training for Booth Officials and EDTs on machine set up and accumulation. This includes the need to:

- Ensure that an adequate number of qualified poll workers are hired and trained to eliminate the staffing difficulties experienced on Election Day
- Ensure that all supplies are properly ordered and packed for each precinct on Election Day
- Ensure that all DREs and printers are tested to ensure that they function properly on Election Day
- Ensure that CCBOE or Ward leaders contact representatives at each polling location to inform them of arrival/departure times of poll workers, verify that the locations have proper electrical capabilities, and to obtain contact information for the person(s) responsible for letting poll workers into the facility
- Ensure adequate time for set up on Monday night.

Poll books had incorrect or missing information

9.100 Poll Worker Impressions: Names, addresses, and signatures listed in the Alphabetical Poll Books are often incorrect. In many instances a voter will have complained of an inaccuracy repeatedly for years that has never been fixed. While poll workers have taken notice of the errors on the Pink Sheets, no action has been taken to remedy the situation. Additionally, voters were often listed two or three times in the poll book. Another major problem relates to registered voters who live in a precinct, but whose names are not listed in the Alphabetical Poll Book. Rather than deal with the intricate paperwork involved with the provisional ballot or because the voter did not have the time to do a provisional ballot, voters left the polling location without voting.

9.101 Poll Worker Suggestions: Proper forms should be available at each precinct so that voters may report these errors directly to the CCBOE for immediate correction. Ensure that voters who have been dropped from their Alphabetical Poll Book are included. Also, a better system for following up on problems reported by poll workers to the CCBOE on the Pink Sheets must be implemented.

DREs and printers proved confusing and unreliable

9.102 Poll Worker Impressions: Printer jams, issues with printer installation, and faulty printer housing were repeatedly reported by the poll workers. Often it took a long time to get the paper in the machine correctly, delaying opening of the polls. Often the printer housing was broken or pieces were missing. Workers were frustrated that the flimsy printer paper would crumple and tear, complicating matters. Sometimes the printer failed to record votes, upsetting voters who believed that their vote was not properly cast. Voters also expected to receive a copy of their ballot and were upset that they did not receive a print out. Some voters were unaware that they could lift the blue covering of the printer to observe the print out and verify their vote. Others reported that magnifiers were broken and/or missing (ironically, the magnifier on the machine provided to the Panel by the CCBOE is broken). In addition, voters reported that the ballot printed too quickly for them to read and verify their vote. Some precincts reported that the printers would not print at all, and many precincts noticed that often the DREs would read “low paper” when the paper was full.

9.103 Poll Worker Suggestions: Poll workers indicated on the incident logs several suggestions for implementation including:

- The manufacturer should redesign the printers to eliminate the problems.
- Printers should be set up the night before to prevent opening the polls late on Election Day due to printer difficulties.
- Ensure voters are aware that they may open the printer covering to view the print out
- Ensure voters are aware that they do not receive a print out of their vote (perhaps make a sign so that poll workers do not spend so much time explaining that they do not get a print out or “receipt”)
- Make print outs easier to read (ensure ink doesn’t smear, font/text is readable, print out doesn’t run by too quickly to be read by voter)

Polling locations were not given enough supplies for Election Day

9.104 Poll Worker Impressions: Poll workers were frequently hindered by the lack of necessary supplies throughout the election. They were missing memory cards and did not have enough voter access cards for the machines. Sometimes they were not supplied with a Zero card. Often there were no electrical cords for machines and the machines could not be used after the battery supply was exhausted. Most precincts reported that they needed more red security seals and were not provided with any additional paper. Some precincts

did not have a phone (or the phone line was dead), VIBS, or flags. Precincts overwhelmingly reported that voters wanted “I Voted” stickers.

9.105 Poll Worker Suggestions: Create detailed checklist for CCBOE employees who are charged with packing the red bags for each polling place for use on Election Day to ensure that all necessary items are included. Had many of the problems of the May 2nd primary been prevented (by better training, careful preparation of supply bags, DREs and printers that had been properly tested), then the large volume of calls experienced on Election Day would have been prevented as well.

9.106 Poll Worker Suggestions: The CCBOE should plan to have Election Day supplies ordered and available well in advance of Election Day in order to meet precinct requirements.

Provide support staff to meet needs for precincts/polling locations without adequate supplies in a timely/efficient manner.

Communication between the polling location and the CCBOE were hindered by poor planning and faulty equipment

9.107 Poll Worker Impressions: Poll workers had difficulty getting through to the CCBOE on the phones. Often, the phones provided by the CCBOE were broken. Slow response times by techs was also reported (some techs never even arrived). Often, DESI and CCBOE representatives did not have a solution to a poll worker’s problem/question. In addition, it appears that the CCBOE/zones did not have a system for tracking calls and responses. In some instances precincts made repeated calls to the CCBOE or zone to request an EDT and ended up having several EDTs show up at the same time (these EDTs were sorely missed by other precincts). A better system for responding to calls by the precincts needs to be implemented.

9.108 Poll Worker Suggestions: Correct phone numbers should be given to poll workers for contacting the CCBOE for support. Phones sent to polling locations should be tested to see if they are in working order.

9.109 Poll Worker Suggestions: Those individuals answering calls need to be trained to effectively respond to poll worker issues. Workers answering phones should have access to better material than the training manual used to train booth workers and EDTs. A manual should be created with common issues and problems and solutions to them so that those answering the phones may better assist poll workers.

9.110 Poll Worker Suggestions: To more efficiently handle poll worker calls and eliminate unnecessary transfer of calls and possible disconnections, calls should be made to only one call center. There are currently three call centers (supply center, zone, and CCBOE).

9.111 Poll Worker Suggestions: Designate more than the six zoning stations used on May 2nd to more adequately respond to poll worker needs. One zone for each of the 46 regional locations would be ideal.

Problems experienced with the DREs

9.112 Poll Worker Impressions: Poll workers reported a large number of broken machines that could not be used on Election Day. Reasons why these machines couldn't be used included: machine malfunctioned, the machine froze and could not be reset, the printer failed, or the printer was missing and the machine could not be used. Many precincts turned voters away because machines were not working while others offered voters optical scan ballots. Faulty table legs on the machines also caused difficulties for poll workers who either attempted to find alternative methods of keeping the DRE up (by taping the legs, for example) or simply did not use the DRE. There were extensive reports of difficulties zeroing out the machines, either due to lack of training, malfunctioning of the accumulator machine, or because memory cards were placed in the wrong machines. Often printer problems prevented workers from printing a zero report.

9.113 Poll Worker Suggestions: Ensure that all Electronic voting equipment is tested before Election Day to eliminate the volume of broken machines on Election Day.

Ensure that poll workers and EDTs are more fully trained how to set the DREs up, basic troubleshooting, and on the accumulation process.

Many problems were linked to memory card, voter card or supervisor card failure

9.114 Poll Worker Impressions: Memory cards, voter cards, and supervisor cards often failed to work. Cards often became stuck in the machines causing further delays in voting. Often memory cards were not placed in their corresponding voting units and workers claim that they were never trained to do so. Though orange instruction sheets were placed with the supplies and materials given to the poll workers for use on Election Day, often these sheets were not discovered until after all of the machines were set up and in use.

9.115 Poll Worker Suggestions: In order to minimize or eliminate problems, memory cards, voter access cards, and supervisor cards should be tested prior to Election Day. Further, the CCBOE should ensure that all precincts have all required cards for Election Day.

9.116 Poll Worker Suggestions: Include instructions about placing memory cards in corresponding voting units in training and make orange instruction sheets more conspicuous. Also, ensure that poll workers are properly trained to use the supervisor cards. Often workers were hesitant to do so in fear that they would "mess up" the tally on the machines.

Malfunctioning encoders caused problems on Election Day

9.117 Poll Worker Impressions: Often encoders failed to work. At other times the buttons on the encoder malfunctioned. Workers reported that encoders sometimes programmed the wrong ballot or did not accept programming for issues only ballots.

9.118 Poll Worker Suggestions: Test encoders before Election Day to ensure that cards are programmed correctly and that buttons work.

There was a shortage of poll workers at the polling places on Election Day

9.119 Poll Worker Impressions: Some precincts reported that workers left because they felt unprepared by the training to work on Election Day. In addition to worker absences, some precincts reported that many poll workers were: incapable of working or unhelpful, left their station for long periods of time, or were uncooperative and unwilling to work with their fellow poll workers.

9.120 Poll Worker Suggestions: Providing better training for poll workers will ensure individuals feel comfortable and prepared to work on Election Day. This process will prevent Booth Officials and EDTs from quitting, because they feel unprepared for their job.

9.121 Poll Worker Suggestions: The CCBOE should expand recruitment efforts to ensure a more diverse poll worker population. This would include taking measures to make the public aware of the need for poll workers.

9.122 Poll Worker Suggestions: Implement an evaluation process for poll workers who have repeatedly been uncooperative, unhelpful, or combative to measure their performance on Election Day. The CCBOE should also ensure that some action is taken to either remedy the behavior or remove them from their position.

Appendix A: Work Plan — Project Scope

Cuyahoga Election Review Panel (CERP) Task List

Review election master plan and evaluate execution of the plan.

Review all election related procurements and procedures used for those procurements.

Review the performance of critical CCBOE personnel assigned to the election process.

Investigate any contractual or other relationship between Dayton Legal Blank, ES&S and Diebold.

Review the Booth Officials Office including:

- Recruitment
- Training
- Deployment of Booth Officials and pool staff
- Attendance
- Feedback
- Analyze incident reports from Booth Officials, and election technicians and organizations
- Interview Booth Officials and election technicians to assess election
- Conduct telephone surveys of Booth officials and EDTs

Review of Registration System including:

- Purging procedures
- Registration challenge procedures for Election Day
- Provisional ballot procedures

Review the operations of the Warehouse including:

- Device preparation and loading ballot styles by voting location
- LNA/IV&V Testing at the Warehouse
- Device deployment
- Device security
- Supplies at polling location
- Voting location readiness and availability @ 6:30 am.
- Voting device failure rate and reasons for failure

Review the operations of Ballot Prep including:

- Design of ballot
- Creation of ballot styles
- Ballot rotation and proofing
- QC of optical scan ballots

Election Day procedures and performance including:

- Polling location setup
- Polling locations open 6:30 am to 7:30 pm
- Call center logs and resolutions to complaints
- Pink Sheet issues/Supervisor cards
- Performance of Election Day technicians
- Performance of Election Day inspectors
- Poll closing procedures

- Return of memory cards
- Return of devices
- Call Centers including scalability and responsiveness

Ballot Counting procedures and performance including:

- Testing of vote tabulation machines and readers
- L&A testing of readers and tabulation machines
- IV&V by the SOS of readers and tabulation machines
- Chain of custody of memory cards
- Reconciliation of Certificate # 1 by polling location
- Review all procedures used to conduct the official count

Review Administrative Structure and Personnel Issues including:

- administrative and reporting structures
- communication systems between top managers and the Board
- communication systems between department managers and top managers
- criteria for hiring and promotion of staff
- overtime & compensation issues for permanent staff temporary staff recruitment, deployment, supervision, and evaluation
- systems for employee reports of legal infractions (“internal whistleblowing”)
- methods for follow-up on voter & advocacy organization concerns/recommendations
- communication systems between candidates and BOE on election problems/results

Absentee Ballot system procedures and performance including:

- Assess contract compliance by Diebold and MCR
- Timeliness of procurement process by CCBOE
- Evaluate absentee ballot system testing including L&A test and ballot test packs
- Evaluate IV&V testing by Secretary of State
- Evaluate printed ballots for accuracy for all ballot styles
- Timing marks
- Assess alternate ballot count procedures used for unofficial and official count
- Evaluate the absentee ballot counting system to determine reason for failure during unofficial count and assign responsibility for system failure
- Evaluate absentee ballot system performance during February Special Election and any corrective actions

Election Science Institute (Contract)

- Exit polling of voter satisfaction with electronic voting
- Evaluate need for additional machines based on failure rate
- Compare manual count with electronic vote
- Compare memory cards to manual count
- Review election process for security threats

SysTest, LLC (Contract)

- Evaluate absentee ballot system testing including Logic and Analysis (L&A) testing and ballot test packs
- Evaluate IV&V testing by Secretary of State
- Evaluate printed ballots for accuracy for all ballot styles
- Timing marks
- Assess alternate ballot count procedures used for unofficial and official count
- Evaluate the absentee ballot counting system to determine reason for failure during unofficial count and assign responsibility for system failure
- Evaluate absentee ballot system performance during February Special Election and any corrective actions

Appendix B: Cuyahoga Election Review Panel Staff

<u>Position</u>	<u>Name</u>	<u>School</u>	<u>Degree / Year in School</u>
Project Manager	Rachael Balanson	Maxine Goodman Levin College of Urban Affairs	M.P.A.
Legal Analyst	Laura Black	Case Western Reserve Law School	3L
Legal Analyst	Kevin Burns	Georgetown Law Center, Washington D.C.	LL.M. Candidate 2007
Legal Analyst / Docs Manager	Matilda Carrena	Cleveland Marshall College of Law	3L
Assistant P.M. / Technology	Arthur (Turo) Dexter	Cleveland State University	B.A. Candidate
Legal Analyst	Christine Frieder	Case Western Reserve Law School	3L
Legal Analyst	Michael Holbrook	Cleveland Marshall College of Law	1L
Legal Analyst	George Inman	Case Western Reserve Law School	1L
Legal Analyst	Gabrielle Kelly	Case Western Reserve Law School	3L
Systems & Legal Analyst	David Kettyle	Case Western Reserve Law School	1L
Systems & Legal Analyst	Lou Kroeck	Case Western Reserve Law School	1L
Legal Analyst	David Levine	Case Western Reserve Law School	1L
Systems & Legal Analyst	Austin McGuan	Cleveland Marshall College of Law	3L
Legal Analyst	Suzanne Melgun	Cleveland Marshall College of Law	2L
Outreach Coordinator	Ramona Ramos	Mercyhurst College	B.A. Political Science
Admin Support	Jerry Rugley	Maxine Goodman Levin College of Urban Affairs	B.S. Urban Studies
Legal Analyst	Amber Samuelson	Case Western Reserve Law School	1L
Legal Analyst	Daniel Thiel	Cleveland Marshall College of Law	3L
Co-Editor / Stats Analyst	Paul (Ben) Trimble	Maxine Goodman Levin College of Urban Affairs	M.U.P.D.D. Candidate
Admin Support	Hong Zenisek	Cleveland Marshall College of Law	2L

Appendix C: Glossary of Terms

- **17 Year Old Voters:** Voters who will be 18 by the November general election and who are allowed to vote for candidates (only) in the Primary Election.
- **Absentee Ballots:** A ballot sent to a voter upon request . The ballot must be completed according to the directions provided. The cast ballot must be returned to the CCBOE office before the close of the polls on Election Day.
- **Access Card:** see *Voter Access Card*.
- **Accumulator Report:** Final tally of votes cast on electronic voting devices. The report is printed before polls open and at the close of the election. (see also *zero report*).
- **AccuVote TSx:** The model of touch-screen DRE voting machine in use on May 2, 2006, in Cuyahoga County. The AccuVote TSx is a DESI product.
- **Alphabetical Poll Book (APB):** The signature book at the polling location listing voter names, addresses, dates of birth, and preprinted signatures. Voters must sign this book in order to cast a ballot at a polling location. Also referred to as the Alpha Book.
- **Audit Book:** Book where Booth Officials list the voters' names according to the type of ballot the voter receives (e.g. Republican, Democrat, Independent, Issues Only).
- **Barrel Key:** A round, hollow, barrel-shaped key used to open several doors on electronic voting machines.
- **Board of Elections (BOE):** General reference to a Board of Elections, not specifically Cuyahoga County's.
- **Booth Official:** Poll worker assigned to a precinct charged with signing in voters, receiving ballots, and the opening and closing of a polling place.
- **Central Administration Card (CAC):** A card used for administrative control of the electronic voting machines. This card has the capability to delete data and zero vote totals.
- **Cast:** The final act of a voter in entering the voting selections on a ballot.
- **Canvas:** Reconciliation of the number of voters recorded in the polling book to the number of ballots cast.
- **Card Cast Reports:** Report produced by the GEMS program. Shows the votes cast in each precinct.
- **Cuyahoga County Board of Elections (CCBOE):** The CCBOE is responsible for overseeing all Federal, State and local elections held in Cuyahoga County.
- **Central Count Optical Scan (CCOS):** System used in Cuyahoga County to count absentee ballots.
- **Certificate #1:** The form that Booth Workers use to certify their total counts at the end of the polling day.
- **Cuyahoga Election Review Panel (CERP):** The Cuyahoga Election Review Panel has been appointed by the CCBOE to conduct a comprehensive independent review of the County's elections systems and to make recommendations for improvement. The Panel is investigating CCBOE practices

and technology, as well as personnel issues like staffing and training of poll workers and CCBOE employees. The Panel reports both to the CCBOE and to the Board of County Commissioners.

- **Crystal Reports:** A software package, sold by Business Objects, used to generate reports. Crystal Reports is integrated into some of DESI's election software products.
- **Data Information Management System (DIMSnet):** Voter registration system used in Cuyahoga County. (DIMS is the division of DESI that makes the software product called DIMSnet.)
- **Democrat (D):** Political party, or member of the Democratic Party. State law requires many elections functions to be performed in tandem by a D and an R. Each precinct must be staffed by two D Booth Officials and by two R Booth Officials. BOE permanent staff are required to reflect bipartisan balance as well.
- **Diebold Election Systems, Inc. (DESI):** The vendor of election technologies and services used in the May 2, 2006, election in Cuyahoga County, including the AccuVote TSx and OS voting systems, the DIMSnet voter registration system and the GEMS election management system.
- **Direct Recording Electronic System (DRE):** A category of voting system that displays a ballot image and allows voters to cast votes via mechanical or electro-optical devices. The system processes the data by means of a computer program, records voting data in internal memory devices, and tabulates voting data as hard copy or stores it in a removable memory device.
- **DIMS External Interface (DXI):** DESI software used by the State of Ohio to interact with county voter registration databases to maintain the state-wide voter registration database mandated by HAVA.
- **Election Day Technician (EDT):** Poll workers hired by the CCBOE to assist with assembling, disassembling, and troubleshooting associated to the DREs, encoder cards, VVAPTs on the day of the election.
- **Election Media Processor (EMP):** A peripheral device, sold by DESI and pending certification in Ohio, that permits simultaneous upload of voting data from six memory cards. EMPs are also used to create memory cards prior to an election.
- **Encoder:** Handheld device used by Booth Officials to program the access cards voters use to operate a DRE voting machine.
- **Election Science Institute (ESI):** Non-profit organization which performs elections and elections technology research. Conducting polling and security research for Cuyahoga County.
- **ES&S Systems:** Vendor of election systems and equipment.
- **E-Voting:** Electronic voting.
- **Government Accountability Office (GAO):** The non-partisan audit, evaluation, and investigative department of Congress and an agency in the Legislative Branch of the United States Government. GAO investigates all matters related to the receipt, disbursement, and use of public funds and make reports to the President

and Congress with recommendations relating to the efficiency of public expenditures.

- **Global Election Management System (GEMS):** DESI software used by the CCBOE to create ballot layouts and to tabulate votes.
- **Geographical Information Systems (GIS):** Computer-based systems for creating, storing and querying databases of geographical information based on the spatial relations of the data.
- **Help America Vote ACT (HAVA):** A Federal law that passed in October 2002 specifying changes in the nation's voting systems.
- **House Bill 3 (H.B.3):** Bill passed by the Ohio Legislature in early 2006 that includes provisions requiring voters to present acceptable identification to poll workers in order to vote.
- **The International Board of Standards for Training Performance and Instruction (IBSTPI):** Prescribes sets of competencies as standards for instructors and for instructional design.
- **Institute of Technology Services (ITC):** Company contracted by the CCBOE to create the training manuals for the 2006 primary elections in Cuyahoga County.
- **Logic and Accuracy Test (L&A Test):** The process by which voting equipment is configured, tested, and certified for accuracy prior to an election.
- **National Association of State Election Directors (NASSED):** A group of state election directors and administrators that meet and discuss national common issues. Certifies elections equipment.
- **Optical Scan Ballot:** Ballot form on which voters place votes by either filling in a rectangle, circle, or oval or by drawing an arrow corresponding to their voting selection.
- **Ohio Revised Code (O.R.C.):** The Ohio Revised Code contains the laws of Ohio enacted by the State legislature.
- **Optical Scan Memory Cards (O/S Memory Cards):** Memory cards that go into the optical scan unit for ballot tabulation.
- **Optical Scan Unit:** The electronic tabulator and auto feeder of the optical scan ballots.
- **Personal Computer Memory Card International Association Slots (PCMCIA Slot):** Location where the memory card is inserted in the DRE machines.
- **Precinct Count Optical Scan (PCOS):** Optical scan voting system where the voter inserts the ballot into a device that counts the votes in a polling location.
- **Pink Sheets:** Incident reports to be filled out by Booth Officials on the day of the election to document problems that occurred throughout the day, especially those which affect ballot reconciliation.
- **Pink Room:** Room at the CCBOE used on Election Night for intake processing of ballots and supplies.
- **Polling Place:** Designated voting facility where voters cast ballots. Includes one or more precincts.
- **Poll Workers:** Booth officials or Election Day Technicians that work at the polling places on Election Day.

- **Pool Workers:** Temporary staff members that are on call on the day of an election and deployed throughout the County as needed.
- **Precincts:** Smallest geographic area in US voting subdivisions for local elections. A precinct usually has from 200 to 1,000 voters in it. Each precinct has an elected precinct captain or neighborhood party leader.
- **Presiding Judge:** Booth Official in charge of each precinct on the day of the election. They are responsible for turning in the memory cards and completing paper work.
- **Provisional Ballots:** Allows individuals whose names do not appear on the precinct's list of registered voters to cast a ballot. This ballot is not added to the voted ballots until it is determined by local election officials that the specific individual is entitled to vote in the election.
- **Public Service Announcement (PSA):** An non-commercial message of a public service nature communicated by mass media. Voter education campaigns may make use of PSAs.
- **Quality Manager (QM):** Manager in charge of organizational quality and process documentation.
- **Republican (R):** Political party, or member of the Republican Party. State law requires many elections functions to be performed in tandem by an R and a D. Each precinct must be staffed by two R Booth Officials and by two D Booth Officials. BOE permanent staff are required to reflect bipartisan balance as well.
- **Request for Proposal (RFP):** A solicitation used when discussion may be required prior to contract award; a document used for soliciting competitive proposals.
- **Rovers:** Election Day Technicians who went from one polling location to another to correct problems at the polls such as lack of supplies or technical problems.
- **Supervisor Access Card (SAC):** Card that allows access to the administrative function of the DREs.
- **Sequoia:** Company that sells voting machines and software.
- **Sole Source Purchase Order:** An order for purchase of products or services when they are available from just a single supplier. Generally receives extra scrutiny before issuance due to the potential for higher costs.
- **Secretary of State (SOS):** SOS is the elected official in Ohio who is chiefly responsible for the conduct of elections in the state. The SOS's office negotiated the master contracts with election system vendors and distributed the federal HAVA funds on behalf of the counties. The office is presently held by Hon. J. Kenneth Blackwell.
- **Split Precinct:** Any precinct where there are separate ballots for localities within a precinct due to differences between the precinct boundary and those of another jurisdiction. Often these separate ballots have different issues, such as school levies.
- **STS100:** Type of encoder used to program voter access cards.

- **SysTest Labs, LLC:** Company that does independent voting equipment certification and testing. Contracted by Cuyahoga County to evaluate problems with optical scan voting in the May 2006 election. See Appendix M.
- **Triad:** Elections hardware and software vendor.
- **Voter Access Card:** Card encoded by a Booth Official for each voter, which allows operation of a DRE voting machine. Encoded to specify proper ballot to be displayed for a voter and any special configuration of the voting machine, such as a magnified screen, or audio mode of a DRE configured with a VIBS kit. Requires re-encoding before each use.
- **VEMACS:** The voter registration system used in Cuyahoga County before DIMSnet was adopted.
- **Voter Verified Paper Audit Trail (VVPAT):** The paper trail of ballots cast recorded by the printer on the voting machine.
- **Visually Impaired Ballot Station (VIBS):** Headphones and keypads for disabled voters to assist them in voting independently.
- **Zero Cards:** Memory cards used in association with the accumulation machine.
- **Zero Report:** Report that shows that there are zero votes on voting machine. Printed at the beginning of Election Day before the polls are opened, to show that no votes are present on the memory cards when voting starts.
- **Zone Stations:** Locations throughout a city set up to support polling locations with supplies and technical assistance.

Appendix D: Election Night Proposal

Proposed Election Night Process

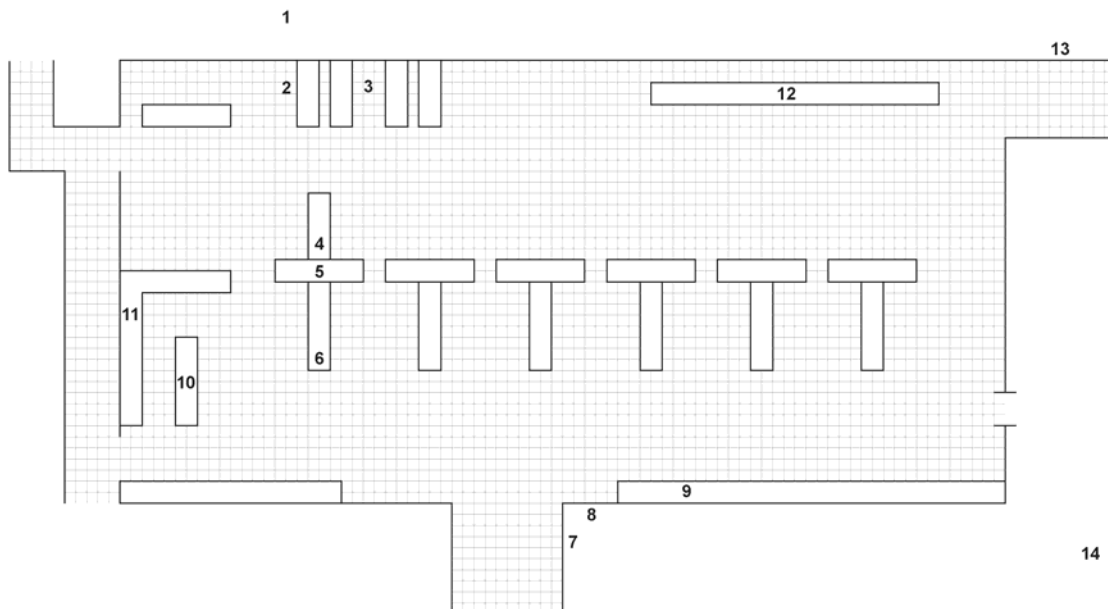
Transfer Station

1. Taxi Cab vans pick up Democratic and Republican staff person at the CCBOE and travel to transfer station where they meet CCBOE staff.
2. After polls close, CCBOE staff collects red/blue bags delivered by the Presiding Judges, checks them off a list and loads them into a van.
3. If Red/Blue bags are unsealed a trouble sticker is placed on the bag with the word 'seals' written on the sticker.
4. CCBOE staff collects bag until 9:00 or until all of the bags are received which ever is sooner. If bags are missing at 9:00pm, the van is released and the CCBOE staff should remain behind to carry the remaining bags to the CCBOE by car.

Pink Room

1. Red/Blue bags loaded on rolling shelves in parking lot and stored under tent until there is room in the staging area.
2. Rolling shelves lot number and bags scanned in staging area.
3. Scanned rolling shelves wait in the staging area.
4. Rolling shelves wheeled to each table, city/ward/precinct and seal number recorded on Election Night Checklist.
5. Alpha poll books, memory card bag and curbside voted ballots loaded on to tray and checked off checklist. Table Captain verifies the number of memory cards corresponds to printed number on outside of memory card bag. If number of cards do not correspond to the number on the outside of the bag an ALERT ticket is placed in the memory card bag. Checklist placed in red/blue bag. If any items are missing from the bag a trouble sticker is placed on the bag and it is referred to the trouble table. Bags arriving at the CCBOE with a trouble ticket on them are also taken to the trouble table after poll books, memory cards and voted ballots are removed.
6. Runners take alpha poll book to #10 and memory card bag and curbside ballots to #7.
7. Memory card bags logged into computer room. Memory cards removed from bag and placed on staging table.

8. Empty memory card bags place in window for filing. If memory cards were missing from the bag, bag is held in computer room until memory cards are recovered.
9. Empty memory card bags filed on shelves in city/ward/precinct order.
10. Certificate #1 removed from alpha poll book and taken to the basement where they can be sorted by city/ward/precinct for reconciliation with ballots cast report.
11. Alpha poll books filed by city/ward/precinct.
12. Trouble table for red/blue bags.
13. Rolling shelves move to the basement via freight elevator and stored in order by lot number.
14. Red/blue bags containing payroll cards, Pink Sheets, black binders , unvoted ballots, provisional ballot affidavit book and green bags secured in the basement until items are removed and recorded on checklist. The remaining items on the Supply Bag Contents list are also removed once the bags are returned to the warehouse, examined and stored for the next election.



Recommended Pink Room floor plan for Election Night
(numbered areas correspond to functions above)

Appendix E: Pink Room Supply Checklist

Election Night Checklist

City _____

Ward _____

Precinct _____

Seal Number _____

____ Red ____ Blue

Table Captain _____

____ Memory Card Bag ____ Number of Cards ____ Number Expected

____ Curbside Ballots

____ Alphabetical Poll Book

____ Trouble Table Referral

Reason: _____

Basement Inventory Team _____

____ Green Bag

____ Black Binder

____ Pink Sheet

____ Payroll Card

____ Provisional Ballot Affidavit Book

____ Unvoted Paper Ballots

The remainder of the items shown on the Supply Bag Contents form should also be removed from bags and stored until the next elections.

Appendix F: Quality Assurance and Continuous Improvement

I. Introduction

Throughout the private sector, there has been a revolution in Quality Assurance. The term no longer refers to throwing out defective items at the end of a conveyor belt. Entire organizations have refocused themselves to make Quality the driving purpose at every station, every desk, every day. Companies large and small have adopted global Quality plans that apply the philosophy of Continuous Improvement to every aspect of their operations.

Continuous Improvement is the idea that changes are best made incrementally, the organization bettering itself by some small fraction every day. Rather than interspersing long periods of stagnation with grand upheavals, companies have been finding ways to make positive change a part of everyday business. This philosophy keeps everyone in the organization thinking about how to do their jobs more effectively. The time is always now—there is no need to wait for the next shake-up to make something happen. Momentum builds as people begin to realize that the organization is growing around them, and they have a hand in guiding that growth.

The beginning of any Quality plan is establishing a baseline. If nobody knows how things are done now, it can be difficult to find the path toward improvement. An organization pursuing Quality must refocus itself on the nuts-and-bolts detail of what it is trying to do, because improvements really begin at that level. Quality flows from transparency and standardization, so detailed manuals should be written up for every task. Everyone needs to know where they stand and what is expected of them. From there, the organization can begin monitoring itself from within, using each of its members as a lens. Information from these lenses travels to one central point, and an image begins to form. This constantly changing image is transmitted to the control center of the organization, where it is used to assess the present and chart the future. Each of these steps is described in more detail below.

II. Create Procedure Manuals

To insure that everyone is performing their tasks completely and efficiently, those tasks must be written out in explicit detail. A step-by-step list of every action involved in a task should be available to anyone who may end up performing it. This list should be exhaustive, in the sense that no key steps are left to the imagination. However, it should also be open-ended enough that it does not become useless in a contingency.

Standardization of manuals allows for ease of lookup and efficiency of understanding. If every department's manual sets forth its procedures in the same format, a reader familiar with one can find information in another much more quickly. Standardized formats give

the reader a framework on which to hang items of knowledge. This promotes retention and eases confusion.

The CCBOE is currently revamping all of its procedures in the wake of new equipment and a new organizational structure. Because new manuals will be written in the near future, there is no better time to standardize their formats and incorporate keystroke-level depth of instruction. The hope of such a program is that if everyone in the building were to vanish, and their functions all had to be performed by emergency stand-ins with no knowledge of the job, those stand-ins could proceed per the manuals and not miss a beat. This way, when anyone asks how a certain task is being done, the Board can respond quickly, confidently, and in exact detail.

Example:

4.0 Entering a Customer Order

- 4.1 Open the Customer Database by double-clicking the Pyramid icon.
- 4.2 Either: Click the New Order icon (upper left corner of the toolbar, looks like a blank sheet of paper), or open the Orders pull-down menu and select "Create New"...the Order Entry screen should now appear (see illustration).
- 4.3 Enter the customer code in the first box, marked "CCode", then press Tab to field-exit. The customer's full name should appear under the "CCode" box.
 - 4.3.1 To look up an unknown customer code, enter the first two letters of the customer's name in the "CCode" box and press F3. This will list all customers referenced under those letters. If the customer name does not appear in this list, press F2 to exit and try entering a different abbreviation. Ask someone before entering as new.
 - 4.3.2 If this is a new customer, press F8 to reach the New Customer Entry screen. Please see section 2.0, Entering a New Customer.
 - 4.3.3 DO NOT press F5 on the Order Entry screen until all yellow fields have been populated. This will generate an Order Number prematurely and create a false record for Billing Department

III. Record Non-Conformances

Once there is a written objective standard for performing a task, there is a fair basis for evaluating actions and situations. Anytime a task does not go as planned, whether in process or result, that fact should be recorded and logged. This is not a discipline system—the purpose of monitoring non-conformances is to learn which aspects of the plan are working and which are dysfunctional.

Just as standardization allows a set of manuals to communicate more knowledge to more people, it also makes recording a problem more manageable. One standard form should be used throughout the organization. The form should be a full page, allowing for detailed description and follow up. When read from beginning to end, it should convey not only what happened but what is going to happen as a result. Dates of every action taken should be recorded, as well as who is responsible for each.

Writing up a form, especially a new one, can be tedious. When many things are going wrong all at once, the last thing anybody wants to do is take time out to write about it. This is why the form must be user-friendly, with prompts sufficient to pull the writer through it, so that they do not have to organize their thoughts beforehand. Reporting of problems should fit into the rhythm of everyone's work. It should become habit to record the small troubles, so that they can be addressed before they blossom into larger ones. As with any system, this one can only help to the extent that it is fully supplied with information.

There should be a low threshold for determining what deserves a write-up. This applies not only to critical emergencies on election night, but also to minute day-to-day problems that one might expect to resolve informally. Examples include software glitches, employee absences, responsibility disputes, misplaced items, voter complaints, situations not addressed by procedures, and so on. Any time a non-conformance report is *not* made, information about that problem is denied to the Quality Assurance system, and the big picture it provides comes through in softer focus. Small issues can grow and combine into larger ones, and true origins can remain hidden if information is missing at the beginning of the chain.

Please see Exhibit One, Sample Non-Conformance Form.

IV. Compile Data

In order to pursue Quality improvement effectively, someone within the organization must own that task. There must be a point person coordinating the effort to improve Quality. In a large corporation this can be a full time job, but in most cases this person has other primary responsibilities. Titles can vary, but in these materials the point person will be referred to as the Quality Manager ("QM"). All data and documentation related to the program should pass through his or her hands.

The main task of the QM is to receive, record, and analyze non-conformance data. Instead of making copies of "Pink Sheets" for every department in the building, all non-conformance forms would be turned into the QM and he/she would determine how to proceed with each one. No department would have the responsibility of deciding which problems are theirs to address, because that function would be centralized. This is not to say that the QM would be making arbitrary decisions about responsibilities—lines of responsibility and oversight would already be objectively established in the procedural manuals. The job of the QM is to process and apply data in light of those procedures.

The QM needs a database to list and save all non-conformances. The exact nature and style of this database varies with the organization, but it need not be extravagant. It will be refined over time. Many organizations use common spreadsheet products to track Quality data, but there are specialized software suites on the market designed for this purpose. This report makes no recommendation as to what software to use... it could be done with pencil and paper if need be. The only necessity is to have one system with one person controlling it.

V. Enact Solutions

No non-conformance filing can be closed out until everyone involved has sat down with the QM and talked about it. This is not meant to be confrontational, and it will not need to be in most circumstances. The purpose is to determine what went wrong and how to control for it in the future. Unless they were directly involved in what happened, supervisors and other management staff should not be present—as noted, this is not a discipline policy. Staff should feel comfortable talking with the QM, or they will avoid writing up situations when they should.

Whatever is decided, it is important that all parties sign off on the solution. Everyone involved should have some ownership of the process going forward. No one can say they did not know about the specifics of the rule when they signed off on it personally. At the QM's discretion, a follow-up meeting can be scheduled to determine if the solution is working. This is suggested when the solution involves a new system or a change in procedures, but not for issues of individual compliance. The system is designed to make sure nobody within the organization can be left out of the loop—if they are, that will become apparent through their actions and appropriate steps can be taken. Outliers are identified and brought back into the fold.

VI. Keep Management Aware

The QM should address the Board and top management on a regular basis. Meetings should be held at least once a month, preferably twice. Weekly meetings may be necessary at times depending on the volume and seriousness of data. These meetings may or may not include a Quality Team, made up of one non-management representative from each department in the organization. Creating a Quality Team enhances the degree of ownership that individual staff members feel, including those who are not personally involved. At least they know that someone at their level who deals with the same difficulties is representing them. This also gives staff an additional conduit through which to communicate ideas or concerns to upper management.

At each meeting, the QM should be reporting all of the data compiled in his/her database from non-conformance reports. Management needs to know where problems are happening, how frequently, and what changes are being made. These meetings are opportunities for various departments to come together and work out solutions that help everyone. When departments make their own calls about handling problem issues, they often fail to account for the ripple effect their actions can have throughout the organization. Furthermore, individual departments can lack the big-picture knowledge needed to create the most effective solution, even when the issue falls primarily within their area of control.

VII. Conclusion

Continuous Improvement will not take hold overnight. However, some benefits will appear quickly. Standardized manuals will make cross-training a much smoother process,

and the more detailed they are, the less time it takes to get a new employee up and running. These manuals will also give third-party observers confirmation that tasks are being performed in a uniform and predictable fashion.

The greatest benefit to this system is the transparency it provides—not only will management always know what is going on, they can prove it. This is why so many major companies and agencies have demanded that their suppliers achieve formal certification of an internal Quality program. Adopting such a program shows outsiders that the organization is its own best friend and worst critic. It asserts that nothing is static, no one is satisfied, and tomorrow will always be better.

EXHIBIT ONE Sample Non-Conformance Form

No. 384

This section to be filled out by the individual reporting the non-conformance.

Name: Department: _____

Date of Incident: _____ Location: _____

What Happened? Describe the incident, including expectations and how those expectations were not met.

This section to be filled out by the Quality Manager.

Relevant Procedure (manual, section number, title): _____

Responsible Party/Department: _____

Check All Applicable: Training Issue Rule Infraction

Procedure Unclear Responsibility Unclear Repeat Incident

Election Security Issue Legal Issue Vendor Issue

Plan for Resolution:

Initial Meeting Date: _____

QM Signature: _____

Responsible Party: _____

Follow-Up Meeting Date: _____

QM Signature: _____

Responsible Party: _____

Appendix G: Job Description for a Training Officer

Training Officer

The purpose of this position is to identify training needs, develop and implement training and cross training curriculum for agency employees, serves primary training and development officer for Elections System (VR) to ensure an efficient, effective and current workforce.

Essential Job Functions:

Identifies agency training needs, develops programs for department employees and evaluates effectiveness of training programs (e.g. – assists with the identification of training needs through communication with Administrator, conducting surveys and tabulating results, assists with the analysis of training techniques and recommends usage of new training techniques; assists in securing or developing materials and instructional resources for training programs; prepares audio visual aids, bulletin boards, handouts and displays, schedules and reserves training facilities when needed).

Implements training programs for department employees (e.g. – assures room and equipment are set up correctly for training sessions; coordinates training process, conducts training following a lesson plan, analyzes evaluation results to improve programs).

Responsible for development and implementation of duty specific training (e.g. – develops training tools and trains agency wide departmental staff on Elections System, assists in troubleshooting with system operator issues, makes recommendations as needed to ensure efficient training and operational procedures).

Works with outside vendors to conduct agency-wide training curriculum; monitors and evaluates vendor performance.

Performs administrative duties (e.g. responds to written or verbal inquiries regarding training programs; maintains filing system on training data; compiles statistics regarding training program effectiveness; inventories training supplies and equipment).

Language Ability and Interpersonal Communication Skills:

Ability to comprehend a variety of informational documents including memos, training literature, and other reports and records.

Ability to comprehend a variety of reference books and manuals including policies and procedures, State regulations and training manuals.

Ability to prepare memos, correspondence, proposals, and other job related documents.

Ability to record and deliver information, to explain procedures and follow instructions.

Appendix H: Revised Certificate #1

Revised Certificate #1 (assuming that provisional voters are given optical scan ballots, that the presiding Judge must reconcile each precinct, that poll workers have the DRE's produce a report that shows each precinct's results, that the poll workers do not accumulate each DRE's results into one DRE and that the poll workers fill out a revised audit book with no distinction between Republicans, Issue voters, and Democrats

Reconciliation of Voters to Ballots Cast (revised Certificate #1)

Ohio Revised Code section 3505.26 requires Presiding Judges to "[c]ount the voted ballots," and states that if the "number of voted ballots exceeds the number of voters whose names appear upon the pollbooks, the presiding shall enter on the pollbooks an explanation of that discrepancy." This precinct's Presiding Judge must complete this form to comply with that section of the Ohio Revised Code.

A. Curbside and Backup Optical Scan Ballots

- 1 Record the highest number *curbside and backup* optical scan ballot (record this number before the polls open): _____
- 2 Record the lowest number curbside and backup optical scan ballot (record this number before the polls open): _____
- 3 Record the number of *curbside and backup* optical scan ballots cast (remove these ballots from the ballot box and count them after the poll close): _____
- 4 Record the number of spoiled *curbside and backup* optical scan ballots (remove these ballots from Envelope #X and count them after the polls close): _____
- 5 Add lines 2, 3, and 4 and enter the total: _____
- 6 Verify that the amount on line 5 equals the lowest unused *curbside and backup* optical scan ballot; if it does not, please explain why: _____

B. Provisional Optical Scan Ballots

- 1 Record the highest number *provisional* optical scan ballot (record this number before the polls open): _____

- 2 Record the lowest number *provisional* optical scan ballot (record this number before the polls open): _____
- 3 Record the number of *provisional* optical scan ballots cast (remove these ballots from the ballot box and count them after the polls close): _____
- 4 Record the number of spoiled *provisional* optical scan ballots (remove these ballots from Envelope #X and count them after the polls close): _____
- 5 Add lines 2, 3, and 4 and enter the total: _____
- 6 Verify that the amount on line 5 equals the lowest unused *provisional* optical scan ballot; if it does not, please explain why:
- 7 Record the number of provisional voters in the Audit Book: _____
- 8 Verify that the amounts on lines 3 and 7 equal; if they do not, please explain why:

C. Touch-Screen Votes

- 1 Record the total number of voters from this precinct's Audit Book: _____
- 2 Enter the number of voters **for this precinct** from Machine 1's Long Report (print this report after the polls close): _____
- 3 Enter the number of voters **for this precinct** from Machine 2's Long Report (print this report after the polls close): _____
- 4 Enter the number of voters **for this precinct** from Machine 3's Long Report (print this report after the polls close): _____
- 5 Record the number of *curbside and backup* optical scan ballots cast (this number should be the same as step A. 3.) _____
- 6 Add lines 2 through 5 and enter the total: _____
- 7 The amounts on lines 1 and 6 should equal; if they do not, please explain why:

D. Certification

We certify that, to the best of our knowledge, the above numbers are complete and represent valid votes:

Poll Worker (D): _____

Poll Worker (R): _____

Presiding Judge: _____

Presiding Judge's Home Phone Number: _____

E. Canvass (to be completed by Board of Elections Employees)

We have reviewed this document and have entered its data onto the spreadsheet that the Board of Elections will use to reconcile the number of voters and ballots casts.

BOE Employee (D): _____

BOE Employee (R): _____

Appendix I: Standards for Training and Instructional Design

These competencies are detailed thoroughly in publications produced by the International Board of Standards for Training, Performance and Instruction (<http://www.ibstpi.org>).

Instructional design competencies

Professional foundations

- Communicate effectively in visual, oral and written form. (Essential)
- Apply current research and theory to the practice of instructional design. (Advanced)
- Update and improve one's knowledge, skills and attitudes pertaining to instructional design and related fields. (Essential)
- Apply fundamental research skills to instructional design projects. (Advanced)
- Identify and resolve ethical and legal implications of design in the work place. (Advanced)

Planning and analysis

- Conduct a needs assessment. (Essential)
- Design a curriculum or program. (Essential)
- Select and use a variety of techniques for determining instructional content. (Essential)
- Identify and describe target population characteristics. (Essential)
- Analyze the characteristics of the environment. (Essential)
- Analyze the characteristics of existing and emerging technologies and their use in an instructional environment. (Essential)
- Reflect upon the elements of a situation before finalizing design solutions and strategies. (Essential)

Design and development

- Select, modify, or create a design and development model appropriate for a given project. (Advanced)
- Select and use a variety of techniques to define and sequence the instructional content and strategies. (Essential)
- Select or modify existing instructional materials. (Essential)
- Develop instructional materials. (Essential)
- Design instruction that reflects an understanding of the diversity of learners and groups of learners. (Essential)
- Evaluate and assess instruction and its impact. (Essential)

Implementation and management

- Plan and manage instructional design projects. (Advanced)
- Promote collaboration, partnerships and relationships among the participants in a design project. (Advanced)
- Apply business skills to managing instructional design. (Advanced)
- Design instructional management systems. (Advanced)
- Provide for the effective implementation of instructional products and programs. (Essential)

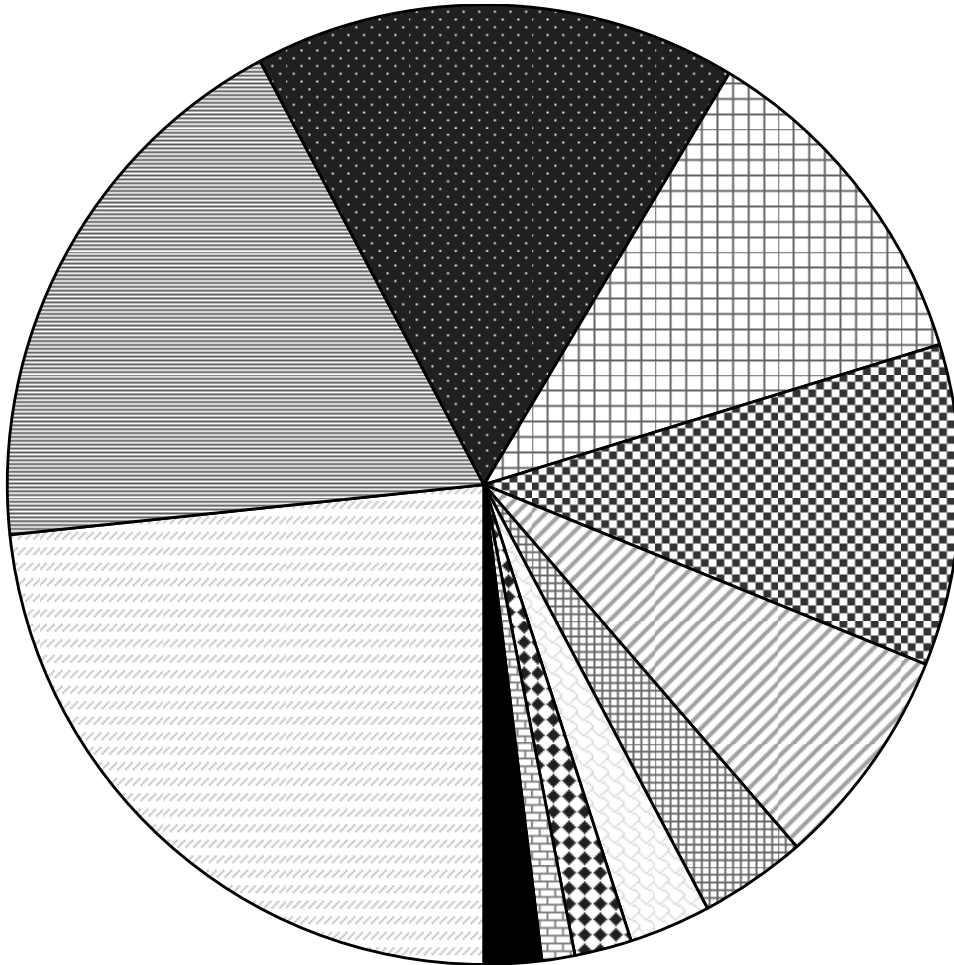
Instructor competencies (2003)

- Communicate effectively.
- Update and improve one's professional knowledge and skills.
- Comply with established ethical and legal standards.
- Establish and maintain professional credibility.
- Plan instructional methods and materials
- Prepare for instruction.
- Stimulate and sustain learner motivation and engagement.
- Demonstrate effective presentation skills.
- Demonstrate effective facilitation skills.
- Demonstrate effective questioning skills.
- Provide clarification and feedback.
- Promote retention of knowledge and skills.
- Promote transfer of knowledge and skills.
- Assess learning and performance.
- Evaluate instructional effectiveness.
- Manage an environment that fosters learning and performance.
- Manage the instructional process through the appropriate use of technology.

Appendix J: Tallies of Booth Official and EDT Incident Reports

Booth Official Incident Report Summary: May 2, 2006	
ISSUE	INCIDENTS
POLL BOOK ISSUES	753
MACHINE ISSUES	612
POLL-WORKER ISSUES	534
SUPPLY ISSUES (Insufficiency)	379
ENCODER/ CARD PROBLEMS (other than insufficiency)	350
INSTRUCTIONS/ TRAINING	240
COMMUNICATING WITH CCBOE/DESI	117
LATE OPENING	97
SECURITY SEALS	62
PROVISIONAL VOTING PROBLEMS	36
OTHER	60
TOTAL:	3,240
Notes: Numbers derived from May 2, 2006 Pink Sheets, 1260 of 1434 total precincts	

Proportions of Poll Worker Complaints



- | | |
|---------------------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Poll book issues | <input type="checkbox"/> Machine issues |
| <input type="checkbox"/> Poll worker issues | <input type="checkbox"/> Supply issues (insufficiency) |
| <input type="checkbox"/> Encoder/Card problems (other than insufficiency) | <input type="checkbox"/> Instructions/Training |
| <input type="checkbox"/> Communicating with BOE/Diebold | <input type="checkbox"/> Late opening |
| <input type="checkbox"/> Security seals | <input type="checkbox"/> Provisional voting problems |
| <input type="checkbox"/> Other | |

Booth Official Incident Reports: May 2, 2006	
ISSUE	NUMBER OF INCIDENTS
INSTRUCTIONS/TRAINING	240
Training materials poorly drafted and confusing.	41
Training insufficient and/or confusing.	55
Manual and training did not correspond to actual screens and instructions on machine.	26
Provisional ballot confusion (must enter "yes" 2 times).	10
Poll workers didn't understand instructions about matching the voting unit numbers with the memory card numbers.	40
Poll workers didn't understand that accumulator machine is machine "zero."	4
Poll workers did not get vote tally from machines.	15
Accumulation was not done.	15
EDT not well trained	34
LATE OPENING	97
Due to machine problems	73
Due to supply problems	6
Due to lack of effective help by supervisors	11
Need more time Monday night for setup	7
ALPHABET BOOK ISSUES	753
Names incorrect	252
Addresses incorrect	174
Signatures incorrect	121
Name does not appear in alpha poll book (should be there)	139
Names Appear 2 or more times in alpha book	63
Wrong DOB in poll book	4

SUPPLY ISSUES (Insufficiency)	379
Voter access cards	49
Memory cards (missing)	46
No "Zero" card supplied	5
Electrical cords	34
Red security clips (canister seals)	119
No telephone	4
VIBS	3
"I Voted" stickers	82
Flags	7
Paper rolls	27
Miscellaneous supply issues	3
COMMUNICATING WITH CCBOE/DESI	117
Problems getting through on the phones	46
Phones supplied by CCBOE broken	20
Slow response times by techs	25
Technician never arrived (non-EDT tech)	8
DESI representative did not have solutions.	6
County representative did not have solutions.	1
Zone station unresponsive.	11
MACHINE ISSUES	612
Broken machines	143
Faulty table legs on machine	37
Had to turn voters away due to machine problems	9
Had to use optical scan ballots due to machine problems	12
Blue light not on, but machine still working.	0
Couldn't zero out the machine.	31
Poll workers didn't know they were supposed to zero out the machine.	8
Couldn't print out second zero report.	68
Accumulator machine malfunctioned	21
Unable to run accumulation report	25

Accumulation was not done on "Zero" card because cards were placed in wrong machine.	13
Printer Jams	68
Printer Installation issues	46
Flimsiness of Printer	8
Faulty printer housing	31
Printer failed to record votes	25
Misc. Machine Problems (ballots expired, machine powered down, printer freak outs, etc.)	67
ENCODER/ CARD PROBLEMS (other than insufficiency)	350
Memory cards not working	19
Memory cards were not placed in corresponding voting units.	77
Voter access cards not working	76
Supervisor cards come up as "invalid."	2
Cards stuck in machine.	17
Memory cards missing after votes tallied	2
Voters left with voter access cards	6
Encoder not accepting programming for issues only ballots	28
Encoders breaking	35
Encoders not activating proper ballot	71
Ballot issues (issues/names missing, etc.)	17
PROVISIONAL VOTING PROBLEMS	36
Voter did not complete paperwork.	15
Voter did not sign affirmation	9
Poll worker did not offer proper paperwork	7
Poll worker did not sign affirmation	1
Voter complained that required provisional statement did not apply to his/her circumstances. (Had neither moved nor changed name, was certain had registered to vote in jurisdiction, and yet name was missing from poll book.)	4
SECURITY SEALS	62

Instructions Confusing	8
Fragile and hard to handle	54
POLL-WORKER ISSUES	534
Poll workers absent	197
Party Confusion	127
EDT (Technician) absent	78
EDT (Technician) late	18
EDT not assisting poll workers	25
Poll workers late	22
Poll workers not assisting others	15
Students absent/late	16
Problems w/ polling location (parking, doors locked, noisy children, difficult to access, gas smell, no power, etc.)	36
OTHER (DESCRIBE)	60
Privacy Issues	34
No security on optical scan ballot bag	3
Voters signed in at one precinct and then voted at a neighboring precinct.	10
Difficulties advancing VIB to "Next"	1
Late closing due to machine problems	8
Late Closing due to lack of effective help by supervisors	4
TOTAL:	3,240
<p>Notes: Numbers derived from May 2, 2006 Pink Sheets, 1,260 of 1,434 total precincts</p>	

EDT Incident Report Summary: May 2, 2006

ISSUE	INCIDENTS
MACHINE ISSUES	197
SUPPLY ISSUES (Insufficiency)	111
INSTRUCTIONS/ TRAINING	83
ENCODER/ CARD PROBLEMS (other than insufficiency)	70
COMMUNICATING WITH CCBOE/DESI	44
POLL-WORKER ISSUES	40
OTHER	22
LATE OPENING	20
SECURITY SEALS	13
ALPHABET BOOK ISSUES	5
TOTAL:	605

Notes: Data compiled from 179 Election Day Technician Reports from May 2, 2006

EDT Incident Reports: May 2, 2006	
ISSUE	INCIDENTS
INSTRUCTIONS/TRAINING	83
Training materials poorly drafted and confusing.	20
Training insufficient and/or confusing.	22
Manual and training did not correspond to actual screens and instructions on machine.	12
Provisional ballot confusion (must enter "yes" 2 times).	1
Poll workers didn't understand instructions about matching the voting unit numbers with the memory card numbers.	18
Poll workers didn't understand that accumulator machine is machine "zero."	1
Accumulation was not done.	2
Instructional materials hard to find in election materials	1
EDT not well trained	1
EDT role was not clearly defined	5
LATE OPENING	20
Due to machine problems	12
Due to lack of effective help by supervisors	2
Need more time Monday night for setup	5
Polling site locked; manager did not know voting would occur at the location	1
ALPHABET BOOK ISSUES	5
Names incorrect	2
Addresses incorrect	1
Voters signed in at one precinct and then voted at a neighboring precinct.	1
Voter incorrectly listed as felon and has voted in previous years	1

SUPPLY ISSUES (Insufficiency)	111
Not enough machines for voters	5
Voter access cards	8
Voter registration cards	1
Memory cards (missing)	9
No "Zero" card supplied	1
Electrical cords	8
Optical scan ballots	1
Printer housing	1
Printer module	3
Red security clips (canister seals)	35
No telephone	2
VIBS	6
VIBS keypad and headset	2
"I Voted" stickers	17
Flags	1
Paper rolls	7
Missing list of registered voters/absentee voters	2
HAVA materials	1
No nametags for EDT	1
COMMUNICATING WITH CCBOE/DESI	44
Problems getting through on the phones	17
Phones supplied by CCBOE broken	7
CCBOE never sent more supplies	1
Slow response times by techs	5
Technician never arrived (non-EDT tech)	2
DESI representative did not have solutions.	1
Zone station unresponsive.	11
MACHINE ISSUES	197
Broken machines	38
Faulty table legs on machine	16
Screen covering for machine was damaged	1
Had to turn voters away due to machine problems	1
Had to use optical scan ballots due to machine problems	1
Blue light not on, but machine still working.	2

Couldn't zero out the machine.	5
Couldn't print out second zero report.	11
Accumulator machine malfunctioned	11
Unable to run accumulation report	7
Accumulation was not done on "Zero" card because cards were placed in wrong machine.	7
Electrical cords did not work	3
Printer jams	31
Printer installation issues	18
Flimsiness of printer	12
Faulty printer housing	23
Printer failed to record votes	2
No ink in printer	1
No warning given when printer ran out of paper	1
Printers stacked too high and fell down	1
VIBS keypad broken	1
Difficulties advancing to "Next" on VIB	1
Hard to advance to next screen using touch panel	3
ENCODER/ CARD PROBLEMS (other than insufficiency)	70
Memory cards not working	8
Memory cards were not placed in corresponding voting units.	11
Voter access cards not working	14
Cards stuck in machine.	10
Poll workers were trading memory cards	1
Encoders not accepting programming for issues only ballots	1
Encoder breaking	12
Encoder not activating proper ballot	9
Registered candidates were not listed on the ballot	1
Access card fell out of terminal	1
Candidates for same position not listed on same screen	1
Blank ballot was not cancelled	1
SECURITY SEALS	13

Instructions Confusing	4
Fragile and hard to handle	9
POLL WORKER ISSUES	40
EDT (Technician) absent	4
Poll workers absent	26
Students absent/late	3
Students not assisting voters	1
Another precinct took neighbor's "zero" machine	1
Party Confusion	4
Poll worker shifts were too long	1
OTHER (DESCRIBE)	22
Voter may have voted twice	2
Voter never received absentee ballot	1
Voters could not view voting summary	2
Voter not permitted to write-in candidates	1
Not enough parking for voters	3
Horseshoe configuration does not work; lack of voting privacy	4
Font on the memory cards and machines is too small	1
No security on optical scan ballot bag	2
Election materials disturbed between Monday night and Tuesday morning (no longer secure)	1
Late Closing due to machine problems	2
Voter did not complete paperwork.	1
Voter complained that required provisional statement did not apply to his/her circumstances.	2
TOTAL:	605
Notes: Data compiled from 179 Election Day Technician Reports from May 2, 2006	

Appendix K: Errors and Omissions in the May 2006 Booth Officials Manual

<u>Page Number</u>	<u>Detailed description of problem</u>
Pg. 9	Important to highlight that precincts can use any machine as long as voter's access card is correctly coded.
Pgs. 14, 16, 19	The manual refers to the DESI Quick Reference Guide for opening polls, but the guide does not specify which steps are done Monday night versus those that are done on Tuesday morning.
Pg. 15	In step 9, the book makes reference to figure 8. In the other places the steps and figures correspond. This could be confusing for some people.
Pg. 16	Directions should say to skip section 5.4 and go directly to 5.5 if not setting up a VIBS machine.
Pgs. 16-17	The figures continue with numbering from previous page, but the steps start with number one again.
Pgs. 16, 18	The manual says to refer to DESI's Quick Reference Guides for setup, but the manual does not state where items are located.
Pgs. 19, 24, 25	The manual and the Quick Reference Guide give directions on how to install the printer. It's difficult to know when to do the steps when there are instructions (that reference each other) in multiple places.
Pg. 23	In the manual, steps 3-4 of section 6.6 differ from those on the DESI Quick Reference Guide. DESI says to insert the memory card, and then press the red on/off button.
Pg. 25	Section 6.7 is not explained on the DVD that was given to poll workers.

- Pg. 25 Section 6.7 contradicts steps 19-21 on the DESI Quick Reference Guide for Printer Module.
- Pg. 26 Step 7 of section 6.8 misspelled printer as 'pritner'.
- Pg. 26 Pictures would be helpful for section 6.9.
- Pg. 26 The DVD differs from the manual. For example, the DVD says "NO" to print write in candidates; whereas, the manual says press "Yes."
- Pg. 28 The manual puts Presiding Judge in charge of posting voting materials and displaying flag, but the section 4.1 of the EDT manual states that it's a priority duty that the EDT should handle.
- Pg. 32-33 In section 7.3, the steps use letters (A, B, C), but the rest of the manual uses numbers.
- Pg. 45 Section 9.8 does not state whether the voter can obtain a new Voter Access Card if the ballot is cancelled automatically after 120 seconds.
- Pg. 47 The "Warning" needs to be moved to the bottom of the page. It breaks up the instructions and can be confusing to follow.
- Pg. 47, 57 Precinct is misspelled as 'precint'.
- Pg. 47 Under section 11.2, step 2, and the manual should explicitly state what the Booth Official is hitting "Yes" to, or step 2 should be moved to section 11.1 as step 4.
- Pg. 47 Section 11.2, steps 4 and 5, contradict the DVD that says "NO" to print write-ins and "YES" to print long report.
- Pg. 48 Section 11.3, step 7 says to push the red button to turn off the voting unit, but doing this actually turns the TSX machine back on.
- Pg. 48 Section 11.3, step 8 the phrase "on the lock" is repetitive and needs to be removed.

Pg. 48	Section 11.3, steps 8-9, you cannot insert the key into the lock until the Memory Card door has been closed. It would be better to combine the steps into one.
Pg. 48	In section 11.3, in some instances the 'm' in memory card is capitalized and other times it is not. It needs to be consistent.
Pg. 49-50	Section 11.4, steps 9, 14, 16, 18-25 conflict with what the DVD says.
Pg. 54	Section 12.1 with general information on closing the polls should come before the technical information on how to shut down the machines.
Pg. 55	<i>All</i> the directions in section 12.3 for completing the Certificate #1 are incorrect. The directions do not match the current Certificate #1 inside the poll books.
Pg. 56	The "Warning" phrasing is difficult to follow.
Pg. 56	First time using the term "chamber seal". No explanation of what a chamber seal is and if it is different than the seals referred to throughout the manual
Pg. 58	The picture of the canister bag needs to be changed. The canister bags are green, but in the picture it is blue.
Pg. 63	Section 13.6 does not tell Booth Officials where to put the payroll card to ensure they are paid for working.
Quick Reference – Printer	Steps 7 & 13 says to "lower metal platen." A more descriptive term should be used to refer to the platen.
General Observation	The duties for poll workers on Election Day that are not related to the TSX machines appear to be "thrown in" the book and not organized methodically. (Ex. pgs. 20-21)

General Observations

The manual should make it clear that the printer paper does not belong in the area under the metal plate that is marked “for reports only.”

General Observations

The DVD does not mention placing seals or canister clips at all. These are things that might be helpful if the DVD is meant to demonstrate the actual steps taken on Election Day.

Appendix L: Documents Inventory

TO REQUEST DOCUMENTS, PLEASE CONTACT THE BOARD OF ELECTIONS AT 2925 EUCLID AVE., CLEVELAND OHIO 44115
<http://boe.cuyahogacounty.us> PHONE: (216) 443-3200

File numbers beginning with E denote electronic documents, not hard copy

<u>File #</u>	<u>File Name</u>
<u>1</u>	<u>Public Hearings</u>
1.1	Handouts/Adverts for Stephanie Tubb Jones's Hearings
1.2	Handwritten Notes from all Stephanie Tubb Jones Public Hearings
1.3	Transcripts of Stephanie Tubb Jones' Hearings at Bedford City Hall
1.4	Transcripts of Stephanie Tubb Jones' Hearings at Cleveland City Hall
1.5	Transcripts of Stephanie Tubb Jones' Hearings at Euclid City Hall
1.6	Transcripts of Stephanie Tubb Jones' Hearings at Beachwood City Hall
E1.7	Transcripts from Stephanie Tubb Jones Hearings in Bedford 6-1-06 Voting 3-Bedford
E1.8	Transcripts from Stephanie Tubb Jones Hearings in East Cleveland 6-2-06 Voting 4a-East Cleveland
E1.9	Cuyahoga Election Review Panel Hearing on June 29 2006-CFO6714
<u>2</u>	<u>Training</u>
2.1	Booth Official Training Manual (18) plus 1 paper copy
2.2	Election Day Technician Training Manual (20)
2.3	Copy of Notice of funds for creation of Booth Official and EDT Training Manual
2.4	Copies of Request for Proposal (RAP)(for creation of Booth Official and EDT Training Manual.
2.5	EDT Recruitment
2.6	Bid Specifications for Booth Officials and EDT Professional Training Program
2.7	Election Official Manual
2.8	Montgomery County Board of Elections -Poll worker Procedures Manual and Mont. City TSX Implementation
2.9	2004 Chief & Assistant Chief Election Judge Workbook
2.10-	Lorain County Poll Workers Training Manual Index
2.11	Dane Thomas Letters
2.12	Maryann McBride Letters
E2.13	High Schools for May 06
E2.14	Final Training Schedule-Phase I-11.08.05
E2.15	Final Training Schedule-Phase II-11.08.05
E2.16	11-08-05 St. Helens-Oct 12, 2005-Phase II
E2.17	11-08-05-Stebbins & Dubar High Schools-September 21 and 27, 2005 classes
E2.18	05-02-06 Moraine Civic Center & C.F. Holliday-WCR, KT 4, MIA, & MOR-Judge
E2.19	05-02-06-Payne Recreation Center & Moraine Civic Center-PJ
E2.20-	Revised Script for Training DVD
E2.21	Ohio Poll Worker Training Video Script 1
E2.22	Ohio-How to Vote Large
E2.23	Training DVD content
E2.24	RE: Instruction guide Timeline

- E2.25 How to Vote TSx DVD
- E2.26 Re-FWD_re-Questions & Booth Official Training Classes
- E2.27 Instruction guide timeline
- E2.28 How to mark your ballot- {email}
- E2.29 How to mark your ballot {Adobe}
- E2.30- FWD:Instruction guide timeline
- E2.31 Pocket Card V3
- E2.32 Ohio guide 9
- E2.33 Booth Official Instructional Video
- E2.34 FWD-Poll Worker Training Scripts
- E2.35 Ohio Poll worker Script w AVPM Ballot Station 4.5.1 rev2
- E2.36 TTT Class roster 1
- E2.37 Cuyahoga Training Manual P47
- E2.38 03089_Election Day Technician Training Manual_Final
- E2.39 03026_Booth Official Training Manual_Final
- 2.40- Training Binder, etc.

3 **Administrative/ Personnel**

- 3.1 Directory: Agency, Employee Contact List, Zone Addresses, BOE directory and email addresses
- 3.2 Memorandum from 2006 from:
 - 3.2-1 Michael Vu
 - 3.2-2 Brain Kalusek Election Support Division Manager and his assistant-Joe Dennis
- 3.3 Board of Election Meeting Agenda
- 3.4 Board of Election-Board Action Highlights for March 6 and 13 2006
- 3.5 Status Report
- 3.6 Ms. Judy Grady's letter and Report on Logic Accuracy Script using DRE Voting Units
- 3.7 L&A Planning Meeting Outline
- 3.8 Review Panel: Meeting Agenda and etc
- 3.9 Regional Uploading Site Locations and Instructions
- 3.10- Electronic Voting Implementation-Status Report 3
- 3.11 Board Resolutions
- 3.12 Emails
- 3.13 Project Plans, Tasks, and Initial Risk List for Cuyahoga May Election
- 3.14 Status and Concerns as of April 5, 2006; and CCBOE Imp Project May V13 and V11 with baseline (also in electronic copy)
- 3.15 Letter from Diebold RE: Implementation of Touch Screen Voting Equipment
- 3.16 Cuyahoga County Project Status Report
- 3.17 Action Items List-State of Cuyahoga County-Revision Date 10/7/05
- 3.18 Suggestions for Vote Counting and Hand Counting
- 3.19 Directives
- 3.20- Black Box Voting-Ballot Tampering in the 21st Century
- 3.21 CASE Review of May 2 Election and Recommendations for November Election
- 3.22 May 2, 2006 Master Project Plan/ (9 month schedule)
- 3.23 Directory: Districts, Precincts sorted by various categories
- 3.24 **CONTRACTS:** Vendor Contract Agreement and amendments
- 3.25 Cuyahoga County Project Plan Assumptions
- 3.26 Transcripts of Board Meetings pertaining to electronic Voting

- 3.26-1 HAVA Selection of Vendor-February 9th 2004
 - 3.26-2 Selection of Vendor-February 16, 2004
 - 3.26-3 Diebold- Question and Answer Session re- voting units, security and any election issues-May 3, 2004
 - 3.26-4 Special Election in Fairview Park, Berea City School Dis., Fairview Park City School Dist., & Parma City School District-Feb. 8, 2005
 - 3.26-5 Meeting of March 7th 2005
 - 3.26-6 Meeting of May 2nd 2005
 - 3.26-7 In RE: Electronic Voting on April 3, 2006
 - 3.26-8 In RE: Cuyahoga City Board of Elections Meeting on May 1, 2006
 - 3.26-9 In RE: Cuyahoga City Board of Elections Meeting on May 2, 2006
 - 3.26-10 In RE: May 2, 2006- Primary Election Update on May 8th, 2006.
 - 3.26-11 In RE: Cuyahoga City Board of Election on May 20, 2006
 - 3.26-12 In RE: Electronic Voting on October 17, 2005
 - 3.26-13 BINDER: Board Meeting Transcripts from January to June 2006; **TWO BINDERS**
 - 3.27 Time Sheets of Temporary Workers
 - 3.28 Weekly Reports from different departments in the Board of Election (3 Copies)
 - 3.28-1 Ballot Department
 - 3.28-2 Information Systems Department
 - 3.28-3 Absentee Voting/ Candidate Services Department
 - 3.28-4 Community Outreach Department
 - 3.28-5 Candidate and Voter Services (Registration Focus)
 - 3.28-6 Election Support Division
 - 3.28-7 Booth Officials
 - 3.28-8 Voting Locations
 - 3.28-9 Procurement and Operations Department
 - 3.28-10 Staff Meeting
 - 3.28-11 Unknown Name: From Irene Lange
 - 3.29 Policy and Procedures of Cuyahoga City Board of Elections
 - 3.30- Emails from Management regarding Hours of Staff
 - 3.31 Visitors Log
 - 3.32 Report from the Greater Cleveland Voter Coalition
 - 3.33 Electronic Voting Implementation Team
 - 3.34 Registration Department Procedural Manual
 - 3.35 Elections Divisions Procedural Manual
 - 3.36 Voting Locations Department Procedural Manual
 - 3.37 Procurement and Operations Department Procedural Manual
 - 3.38 Booth Officials Procedural Manual
 - 3.39 Absentee Voting/ Candidate Services Department Procedural Manual
 - 3.40- Diebold Proposal
 - 3.41 Ballot Department Procedural Manual
 - 3.42 Office Vouchers
 - 3.43 Budgets
 - 3.44 Implementation Team Highlights and Memo
 - 3.45 Salaries Schedule
 - 3.46 Contract with Secretary of State
 - 3.47 Other Contracts and Agreements
- For Voting Location report see 4.20 below**

- 3.48 Cuyahoga City Board of Elec. Organizational Chart and Job Descriptions
- 3.49 Invitation for a Price Quote (Informal Request for Proposal)-Temporary Workers
- 3.50- Annual Salary Schedule
- 3.51 DIMS and GEMS Questions by the Cuyahoga City Board of Elections
- 3.52 2006 Departmental Budget for various departments
- 3.53 State St Consult-Operating Request: Waiver for Competitive Selection
- 3.54 Time Balances per pay periods
- 3.55 CCBOE Electronic Voting- Implementation teams
- 3.56 Notes/ Letters to Polling Places
- 3.57 Association for Computer Machinery- Statewide Databases of Registered Voters
- 3.58 Questions to Michael Vu and His Responses on Logic Accuracy Test and Overworked Employees
- 3.59 PowerPoint on "Making the Switch"
- 3.60- Resumes and Job Qualifications
- 3.61 Bid Proposal from The Institute of Technology Consulting
- 3.62 Diebold Proposal: A Voter Registration System (CVRS) and Related Services
- 3.63 Diebold Proposal: DRE Precinct Voting System, Absentee Voting System & Voter Registration System
- 3.64 Hart Interactive Docs
- 3.65 Secretary of State's Reference Guide on Recounts of Election Results
- 3.66 Letter from Michael Vu and Summary of Emails RE: Interaction and support level with Diebold
- E3.67- Weekly status reports for Cuyahoga county for certain dates
- E3.67-1 2/3/2006
- E3.67-2 2/17/2006
- E3.67-3 3/10/2006
- E3.67-4 12/16/2005
- E3.67-5 1/13/2006
- E3.67-6 12/9/2005
- E3.67-7 4/7/2006
- E3.67-8 3/17/2006
- E3.67-9 2/24/2006
- E3.68 New Conversion Status Project Plan-April 27
- E3.69 2003 Commissioner Electronic Voting Meeting
- E3.70- Cuyahoga County Project Plan Milestones 2-17-06
- E3.71 Risk Management Plan for Cuyahoga 1-11-06
- E3.72 memo6-16 for panel-poll worker hiring
- E3.73 Petition Module Concerns 06-28-06
- E3.74 Registration errors still not on db 6-29-06
- E3.75 Exit Poll Report 07-06-06
- E3.76 Request for BOE policy on Registration follow up
- E3.77 FWD: Exit Poll report for panel
- E3.78 comp time policy06-26
- E3.79 memo6-16 for panel-
- E3.80- Poll Book Justification Procedure
- E3.81 Poll Book Justification
- E3.82 EDT
- E3.83 2004_repub_Polling_inspector_comments-Survey Results
- E3.84 Largest County Analysis
- E3.85 BOCC Agencies

- E3.86 Email from Candice to Michael Vu [FWD Memo Attached]
- E3.87 Bob Diekman Meeting Agenda 6-9-2005
- E3.88 Briefing Memo Summary
- E3.89 Contract--proposed changes for County DRE
- E3.90- Corp College Agreement
- E3.91 Dir2005-27
- E3.92 DVComparison_Cleveland_1306688_7-Cleveland_1306688_8
- E3.93 Electronic Voting-Briefing Memo
- E3.94 Electronic Voting -Request for Board Action
- E3.95 Secretary of State Monty Lobb-Official Canvas-Official Count Response Letter
- E3.96 Electronic Voting Spreadsheet
- E3.97 Official Canvass Plan-May 2, 2006 Primary
- E3.98 R802.01 petition statistics_2
- E3.99 R802.01 TEL Petition 8-05 Final
- E3.100- Corp College Bid
- E3.101 Corp. College Bidder's Checklist
- E3.102 Invoice-Crystal Reports Training DO
- E3.103 Cuyahoga Draft Implementation Plan
- E3.104 Diversity scope Informal RFP
- E3.105 Diversity Spreadsheet 80105
- E3.106 Do Diversity Training Invoice
- E3.107 Electronic Voting Allegation Confirmation
- E3.108 Electronic Voting Diebold Contract Analysis
- E3.109 Electronic Voting Implementation Synopsis
- E3.110- Electronic Voting Purchases Changes Since Original Negotiations-Jeff Jones
- E3.111 Electronic Voting Spreadsheet
- E3.112 JCO Bidder's Checklist
- E3.113 John Carroll's Bid
- E3.114 LCC Bidder's Checklist
- E3.115 Lorain CCC's Bid [fax]
- E3.116 Manager's Training, Corp College
- E3.117 Memo- Board Implementation Electronic Recommendation
- E3.118 Memo-Board members-11B Poll Workers History
- E3.119 Memo-Board members-2005 NCOA Mailings and Maintenance Efforts
- E3.120- Memo-Board members-Absentee Application Policy
- E3.121- Memo-Board members-Administrative Assistants Responsibilities
- E3.122- Memo-Board members-Campaign Finance Report QA
- E3.123 Memo-Board members-Cleveland Candidates Petitions in Question 2005
- E3.124 Memo-Board members-Dr. White Statement on Transmission of Election Result
- E3.125 Memo-Board members-IS Department Recommendation
- E3.126 Memo-Board members-IT Administrator & Ballot Manager
- E3.127 Memo-Board members-Logic & Accuracy Test Procedures
- E3.128 Memo-Board members-Lorain County Polling Location
- E3.129 Memo-Board members-Organizational Reengineering
- E3.130- Memo-Board members-Poll Worker Salary Increase
- E3.131 Memo-Board members-Precinct Count Optical Scan (PCOS)
- E3.132 Memo-Board members-Realignment 2005 General Staff
- E3.133 Memo-Board members-Realignment Schedule
- E3.134 Memo-Board members-Scanning Documents Initiative

- E3.135 Memo-Board members-Scott Miller Russo Court Action
- E3.136 Memo-Board members-Summary Examination of Pepper Pike D
- E3.137 Memo-Board members-Transmission of Election Results
- E3.138 Memo-Bob Bennett-US Flag Bids
- E3.139 Memo-Optical Scan Position
- E3.140- Memo-Sally Florkiewicz L and A Concern Response
- E3.141 Memo Board Members-Electronic Voting Purchase Order
- E3.142 Message
- E3.143 Norman Robbins-Electronic Voting Response Letter
- E3.144 Ohio BOE's Electronic Voting-Responded- 11-25-2005
- E3.145 Ohio Counties Implemented- November 8, 2005
- E3.146 Public Hearing Agenda- October 17, 2005
- E3.147 Questions to Dana Watch
- E3.148 Regarding personnel changes and procedures-Response
- E3.149 Sam Kindred-RE-implementing a state wide voter registration system
- E3.150- Secretary of State Blackwell-Electronic Voting Implementation Concerns Letter (Final Version)-Not Sent
- E3.151 SOS-County Vendor Selection Confirmation 10-13
- E3.152 Summary of Request-Request for Agenda-To County Commissioner to approve Diebold
- E3.153 Conversion Status Project Plan Report #1
- E3.154 Conversion Status Project Plan Report #2
- E3.155 Memo sent 1-27-06 Winter Conference follow-up
- E3.156 sorry here are the reports-letter from Michael Vu
- E3.157 15 absentees
- E3.158 Board, Administrators & Managers-Communication Memorandum
- E3.159 Contract & Ancillary Equipment
- E3.160- FWD:-Comments to Agreements with Diebold
- E3.161 FWD:-additional correspondence and documents
- E3.162 FWD: communication with the board members
- E3.163 FWD response to questions at review panel meeting and person
- E3.164 FWD: other documents related to the conversion operations
- E3.165 FWD:: response to questions at review panel meeting and person
- E3.166 Email: Luncheon with Stephen Werber
- E3.167 Re- Correction to my earlier note
- E3.168 Voting Machine Contract
- E3.169 LWV_EMAIL_TO_CITY_PROSECUTORS_4_24_06
- E3.170- Managers-Administrators Meetings
- E3.171 10.6.05 Agenda and Letter
- E3.172 17 year olds & federal elections
- E3.173 Absentee Application & Return of Absentee Ballot
- E3.174 Additional Voting units Question
- E3.175 Administrator's meeting-commissioner's meeting
- E3.176 amended Blackwell optical scan decision overview
- E3.177 amended Org. Chart
- E3.178 attached are 2 letters that I have sent to Dana
- E3.179 BLACKWELL NEGOTIATES BEST IN NATION VOTING MACHINE DEAL
- E3.180- Blackwell press release
- E3.181 board meeting dates

- E3.182 commissioners and staff meeting
- E3.183 commissioner's meeting-Diebold Contract postponed
- E3.184 contract
- E3.185 contract concerns
- E3.186 contract issues
- E3.187 contract update
- E3.188 copy available
- E3.189 correction to my earlier note
- E3.190- county prosecutor letter
- E3.191 county requests
- E3.192 Cuyahoga county board of election security plan-transmission
- E3.193 Cuyahoga county implementation clarification needs and concerns
- E3.194 Cuyahoga county press release
- E3.195 Cuyahoga county status update regarding tax limitation
- E3.196 FWD- 10.6.05 agenda and letter
- E3.197 FWD- BLACKWELL NEGOTIATES BEST IN NATION VOTING MACHINE DEAL
- E3.198 FWD- Commissioners & staff meeting
- E3.199 FWD- Commissioner's letter
- E3.200- FWD- Contract Issues
- E3.201 FWD- Contract
- E3.202 FWD- FWD-cart info for Cuyahoga
- E3.203 FWD- Issues not returned from SOS
- E3.204 FWD- League of Women Voters of Ohio, et al. V. Taft, et al.
- E3.205 FWD- M2 change
- E3.206 FWD- Master Contract
- E3.207 FWD-memo attached
- E3.208 FWD-My expertise
- E3.209 FWD- Posted-Sample Ballots
- E3.210- FWD- Project Plan
- E3.211 FWD-Re-Contract
- E3.212 FWD-Re-Cuyahoga County Vendor Selection Meeting Request
- E3.213 FWD-Re-Diebold
- E3.214 FWD-Re-Professor Werber reply and more
- E3.215 FWD-Re-Response
- E3.216 FWD-Revised Best Offer
- E3.217 FWD-State Contract
- E3.218 FWD-Suggested changes to the contract
- E3.219 FWD- State contract
- E3.220- FWD-Suggested changes to the contract
- E3.221 FWD-Tarfis v. BOE-Acknowledgement of Assignment
- E3.222 FWD-Updates-Voting Equipment, DIMS Conference & Weekly Leg
- E3.223 FWD- Voter ID Chart
- E3.224 FYI- Corrupting an Access Card
- E3.225 I'll be available for a call at 3-30pm
- E3.226 Implementation Team Meeting
- E3.227 Individuals who will be attending tomorrow's meeting
- E3.228 Letter I would like to send to all Agency Directors
- E3.229 Letter to the commissioners
- E3.230- Master Contract

- E3.231 Master Contract
- E3.232 Meeting Dates etc.-Voting System
- E3.233 Meeting with Jim Freidman, Jeff Jones & Dave Lambert
- E3.234 Memo-Communication Protocol
- E3.235 Memo-Monday Night Organization Meeting and Election Morning
- E3.236 Memo-Security Handling Procedures
- E3.237 Memorandum-Affidavits
- E3.238 Miscellaneous Items Outside SOS Contract
- E3.239 Mitigation Strategy
- E3.240- My expertise
- E3.241 My testimony to the EAC
- E3.242 New Organization Chart-Please Check
- E3.243 Official Canvass
- E3.244 Org Chart version
- E3.245 Organization Chart
- E3.246 Other points to consider in the letter
- E3.247 Ownership and Digital Guardian
- E3.248 Pat Toller
- E3.249 Performance Test
- E3.250- Phone Conversion Availability
- E3.251 Please review for accuracy
- E3.252 POSTED-Sample Ballots
- E3.253 Primary Election Ballot Using Optical Scan
- E3.254 Public Hearing
- E3.255 RE- Additional Voting Units Question
- E3.256 Re- Ballot accounting chart
- E3.257 Re-BOCC Representative for voting systems process
- E3.258 Commissioners meeting
- E3.259 Re-Conference Call
- E3.260- Re- Confirmation on March 23rd Meeting
- E3.261 Re- Contract
- E3.262 Re- Cuyahoga County transmission briefing
- E3.263 Re- Cuyahoga County-Diebold Agreement for purchase
- E3.264 Re- Cuyahoga County -Diebold Agreement for purchase of
- E3.265 Re-Diebold
- E3.266 Re-Diebold Agreement
- E3.267 RE-Diebold Contract
- E3.268 Re-Diebold Equipment
- E3.269 Re-Diebold-Cuyahoga County Board of Elections Agreement
- E3.270- Re-Diebold Cuyahoga County Clean Agreement
- E3.271 Re-DIMS Voter Registration System Agreement
- E3.272 Re-Distribution to commissioners
- E3.273 Re-FWD:-Diebold Election Systems
- E3.274 Re-FWD: Limited License
- E3.275 Re-FWD-Cuyahoga Additional Equipment Acquisition
- E3.276 Re-FWD-Response to Cuyahoga
- E3.277 Re-FYI
- E3.278 Re-Hart
- E3.279 Re-Hip Pockets

- E3.280- Re-Individuals who will be attending tomorrows meeting
- E3.281 Re-L.A. County VR Documents
- E3.282 Re- Logic & Accuracy Test Scenario
- E3.283 Re- Master Contract
- E3.284 Re-Maximus
- E3.285 Re-Meeting Dates etc-Voting System
- E3.286 Re-Memorandum regarding comments of Candice Hoke
- E3.287 Re-email
- E3.288 Re-Phone Survey for presiding Judges and election Day
- E3.289 Re-Phone mail from Jason Krieser, Jones Day
- E3.290- Re-Pre-Meeting
- E3.291 Re- Response
- E3.292 Re-Revised Best Offer
- E3.293 Re- Revised State Plan comment
- E3.294 Re-Scheduling
- E3.295 Re-State Plan Committee member Appointment
- E3.296 Re-The Columbus Dispatch-Local-State.htm
- E3.297 Re- The Herald-Star New Voting machines considered a success--
- E3.298 Re-Thursday Commission Meeting
- E3.299 Re- Tuesdays Meeting
- E3.300- Re-Voter registration System-Competitive Bidding
- E3.301 Re-VR Contract
- E3.302 Remaking Ballots
- E3.303 request for hearing and count
- E3.304 response to Cuyahoga
- E3.305 revised Best Offer
- E3.306 Revised Contract
- E3.307 School Resolution & Baxter Letter
- E3.308 Smoke Free Ohio Initiative Petition Protest
- E3.309 State Contract
- E3.310- Thursday Commission Meeting
- E3.311 Tie Vote-Parma Tax Initiative Petition
- E3.312 Transmission of Election Results
- E3.313 Transmission of Election Results via DRE & Recount Procedures
- E3.314 Transmitting Elections Results & Recounts on electronic Voting
- E3.315 Update-Diebold Contract
- E3.316 Vendor Selection Scheduling
- E3.317 Verbiage
- E3.318 Voter ID chart
- E3.319 Voting System usage in Ohio
- E3.320- VR contract
- E3.321 VVPAT
- E3.322 VVPAT & Recount
- E3.323 Website and L7A Script
- E3.324 051205dSchdeule B(revised) Pat Toher
- E3.325 Additional (non Sch B) Items
- E3.326 Additional Equipment Purchase -Management Team Version
- E3.327 Austin Mc Guan-Poll Book Justification 1_1
- E3.328 Conversion Budget June 05 w out DRE Stuff

E3.329 Electronic Voting Purchases Changes Since Original Negotiations-Jeff Jones
E3.330- Electronic Voting Spreadsheet
E3.331 In Meeting 2nd Copy
E3.332 L&A Matrix
E3.333 OH Election supply order form 2-4-05_1
E3.334 OHIOSCHEDULEB
E3.335 SchB-Additional_1
E3.336 State Contract fully signed
E3.337 SECURITY4
E3.338 Cuyahoga County DRAFT Project Plan
E3.339 2006 Electronic Voting Security Recommendations for ISS Review
E3.340- 092205a Conf for Consultant (CUYAHOGA)
E3.341 Administrators & Managers-Communication Memorandum-May 2, 200
E3.342 Agenda
E3.343 Blackwell's decisions on Voting System
E3.344 Bob Diekmann- Proposal Response Letter
E3.345 CCBOE & Diebold Contract (Revised) -10-17-2005
E3.346 CCBOE Scope Document 051106
E3.347 Commissioners-Clear Understanding of Contract Letter
E3.348 Commissioners-Electronic Voting from Board Members letter -12-12-2
E3.349 Contract --proposed changes for county DRE
E3.350- count request
E3.351 Cover Memorandum to Directive 2005-07
E3.352 Cuyahoga BF revised 5-25-05 Preliminary
E3.353 Cuyahoga equipment form 2-3-04_2
E3.354 Cuyahoga Financial Analysis for Cuyahoga County (4)
E3.355 Cuyahoga Michael BAFO 2-12-04
E3.356 Dana_extensions
E3.357 Dana_HAVA
E3.358 Diebold Meeting-Jim Friedman
E3.359 DIMS
E3.360- Directors-Election Day Assistance Letter
E3.361 DVComparison_CLEVELAND_1306688_1-CLEVELAND_1306688_4
E3.362 DVComparison_CLEVELAND_1306688_7-CLEVELAND_1306688_8
E3.363 DVComparison_CLEVELAND_1306688_1-CLEVELAND_1306688_3
E3.364 Electronic Voting Allegation Confirmation
E3.365 Judy Grady-Logic & Accuracy Plan
E3.366 Judy Grady-Transmission of election Results Plan
E3.367 Kevin Baxter-Board Members Intention Letter-Version #1
E3.368 Letter of Invite
E3.369 Logic &Accuracy Procedures
E3.370- LovegrenActivism2005July
E3.371 LovegrenResume2055July
E3.372 MAXIMUS CORPORATE PROFILE
E3.373 Mechanical Testing and usability testing of the Diebold Accuvote
E3.374 Memo-Administrative and Management Staff-MNOM and election Moi
E3.375 Memo-Management Staff-Security Handling of DRE
E3.376 Memo-Signing of Affidavits
E3.377 Michael Vu Testimony to Eac-Provisional Voting

- E3.378 Mitigation Strategy- May 2, 2006
- E3.379 Official Canvass Plan release
- E3.380- Organization Chart Version 1.4.2006
- E3.381 Organization Chart Version 12.15.2005
- E3.382 Organization Chart Version 12.20.2005
- E3.383 Performance Committee -Contract Information
- E3.384 RESOLUTION-Public Schools as Polling Locations
- E3.385 Revisions to version 8- License Agreement-OSU Revisions of August 25
- E3.386 Selection Directive 4-14-05
- E3.387 Staff Meeting Agenda
- E3.388 Summary of Request-Request for Agenda
- E3.389 Summary of Request for Appropriation
- E3.390- Trafis, Matthew; v. BOE, COA 87048.0922.05. Oradini
- E3.391 Trafis, Matthew; Worgull, Jim v. USDC. 05CV1282.092305.Oradini
- E3.392 Version 3 DIMS Voter Registration System Agreement
- E3.393 Version 4-Agreement for acquisition of Additional Equipment
- E3.394 Vu memo 3.06
- E3.395 WHY THE ADDITIONAL VOTING UNITS
- E3.396 William Mason-Benesch Freidlander Coplan Aronoff Contract Extension Letter
- E3.397 Hugh Shannon1
- E3.398 Image.XXX
- E3.399 Blank Bkgrd
- E3.400- Scenario in California as of 11
- E3.401 Revisions
 - 3.402 Provisional Report
 - 3.403 Conversion Projection
 - 3.404 Mike Defranco's Emails
 - 3.405 Information from Jacqui Maiden
 - 3.406 Dane Thomas Emails Re: Diebold
 - 3.407 Gwen Dillingham's Record on Interoffice Memo for Administrative departments
 - 3.408 Results of Exit Poll on May 2,2006; by volunteers of the greater Cleveland Voter Coalition. Norman Robbins-Study Leader.
 - 3.409 Annual Report 2004-2005
- 3.410- Board of Elections Reorganizations 2003 "Planning for the future of elections"
- 3.411 Michael Vu's Interoffice Memos and etc.
- 3.412 letter to Michael Vu from Betty Jones and Linda Stemie
- 3.413 Sample Ballots
- 3.414 Report on Issues on the Ballots in Cuyahoga County
- 3.415 Race Summary in the May 2nd Primary Election

4 Election Day Management

- 4.1 Command Center Phone Calls
- 4.2 Election Night Personnel
- 4.3 Official Bulletin-Official Count for Unauthorized Write-In Candidates
- 4.4 Election Summary Report-Summary for Jurisdiction Wide, All Counters, All Races-Official results
- 4.5 Election Day Technician [EDT] Day log for Tuesday [5/2/2006]
- 4.6 Election Day Management Events Information
- 4.7 Unofficial Absentee Results

- 4.8 Command Center Report Forms
- 4.9 Alerts for Booth Officials
- 4.10- Monday Absentee Route
- 4.11 Advisories on Election Day procedures and Using DRE Voting units
- 4.12 Command Center Information Binder
- 4.13 Poll workers response to issues on election day
- 4.14 Election Day Legal problems for Kerry-Edwards 2004
- 4.15 Election Night Bag Return Plan
- 4.16 Temporary elections workers request forms
- 4.17 electronic voting supplies data by precincts
- 4.18 public hearing on electronic voting
- 4.19 voter education & community outreach project plan
- 4.20- voting locations report
- 4.21 election wrap up reports
- 4.22 election voting system survey
- 4.23 Participants workbook (2/18) Rough Draft 2/21 [Manual]
- E4.24 Summary documents for Poll Workers on opening_closing polls with TSx
- E4.25 cctboe-03036-newburg-blank
- E4.26 cctboe-03036-eleveland-blank
- E4.27 cctboe-03036-test-1
- E4.28 Montgomery County Voter Ed Brochure [FWD 3 page fax from '+]
- E4.29 Posting Results Cuyhaoga Procedures
- E4.30- Secure.050206_1-Election Night Security Plan

5 Diebold/ Procurement/ Reconciliation

- 5.1 Instructions for: Transmission Upload, Fax, Bag Delivery
- 5.2 DRE Security and Handling Procedures
- 5.3 2005 & 2006 Directives, memorandum and Advisories (2) original and (3) copies
- 5.3-1 2005 & 2006 Directives, memorandum and Advisories (1) original
- 5.3-2 2005 & 2006 Directives, memorandum and Advisories (2) original
- 5.3-3 2005 & 2006 Directives, memorandum and Advisories (1) copy
- 5.3-4 2005 & 2006 Directives, memorandum and Advisories (2) copy
- 5.3-5 2005 & 2006 Directives, memorandum and Advisories (3) copy
- 5.4 Tests Conducted and testing of transmission of election results over fax lines/ accumulation process
- 5.5 Computer Testing Reports
- 5.6 Issues encountered by CVS Division in utilizing TSX units
- 5.7 Ohio AccuVote-TSx L&A Checklist
- 5.8 Ballots Cast Distribution Summary
- 5.9 Preliminary Findings as of June 5th 2006; Note from Tom Hanes; and Status reports from Michael Holbrook
- 5.10- Summary of Costs-RE: Diebold, DRE, DIMS etc.
- E 5.10-
 - 1 Copy of Cuyahoga Cost Feb Analysis 1 page-
- E5.10-2 Copy of Diff DRE PCOS Years Version 2
- E5.10-3 Copy of DRE- PCOS Difference (Years 1-10)
- E5.10-4 Copy of PCOS Start-Up to Yr 10-2
- E5.11 Election Calendar
- E5.11-1 Election Calendar 05-06

- E5.11-2 2006 Ohio Election Calendar
- E5.12 NR testimony 10-17-05 NR Financial-2
- 5.13 Ohio AG: Petro's Opinion Re: Precinct Count Optical Sounds
- 5.14 Directives Secretary of State: 2005-55, 2005-02,2005-07, 2006-05, 2006-01
- 5.15 Testimony Outline of Norman Robinson Financial Issues in the choice of DRE's or Optical Scan for Cuyahoga. City.)
- 5.16 DIMS-NET Voter Registration System
- 5.17 Encoder Inventory and Usage
- 5.18 DRE Election Results and A Sample Ballot
- 5.19 Ballot Cast Book / Poll Book Justification
- 5.20- Cards Cast Report for may 2nd Election
- 5.21 Precincts Information
- 5.22 Vendor Negotiation Results
- 5.23 DIMS-NET Implementation Guide- Data Map Workbook
- 5.24 Diebold Supplies List
- 5.25 Diebold's Memo on Response to VSPP Recommendations on April 26, 2004.
- 5.26 Project Plan presentation by Diebold
- 5.27 Electronic Voting Demo Survey Results by Diebold
- 5.28 Correspondences sent by Diebold
- 5.29 Itemized list of Supplies included in Contract with Secretary of State and Diebold
- 5.30- Diebold's Minutes of Meeting with the Cuyahoga Board of elections-Title: Cuyahoga Planning
- 5.31 Voting System Conversion Report
- 5.32 Statewide Voting Systems: Vendor Proposal Evaluation Findings Report
- 5.33 Maps/ Work Plan
- 5.34 Precinct Count Optical Scan Solution Report for Cuyahoga County
- 5.35 Cuyahoga City Implementation Kick Off Presentation
- 5.36 Accu-Vote Acceptance Testing Procedures-Absentee Ballot Systems
- 5.37 Invitation for a Price Quote (Informal Request for Proposal)-Printing of Optical Scan Ballots
- 5.38 2006 Electronic Voting Network Security Analysis
- 5.39 Cost Analysis by Cuyahoga County Board of Elections
- 5.40- Security Event Logs
- 5.41 AccuVote-TSX with the AVPM Poll Workers Training Manual for Ballot Station 4.6.1 and GEMS 1.18.22
- 5.42 Mike DeFranco's emails plus DIMS- Net external interface-User's Guide
- 5.43 Les Nyland Emails
- 5.44 Lou Irizarry and Toni LaMarca Emails
- 5.45 Pricing Summary on various dates
- 5.46 Departmental Procedures
- 5.47 Warehouse Layout
- 5.48 Broken Seal found in BOE parking lot
- 5.49 Questions for DIEBOLD
- 5.50- Unidentified Handwritten Notes
- 5.51 Invoices
- 5.52 DIMS Net Training Workbook
- 5.53 Risk Mitigation Strategies
- 5.54 Notes: Diebold Projects
- 5.55 Unidentified Notes and Board Meeting Agenda

- 5.56 Dr. M. Brian Thomas: Mechanical Testing and Usability Testing of the Diebold AccuVote-TSX Voting Machine
- 5.57 Lisa Durkin Emails
- 5.58 Michael Vu's Emails Regarding Diebold/Procurement **[3 BROWN BINDER]**
- 5.59 Brent Lawler's DIMS Trouble Areas 6/28/06
- 5.60- DRE Technical Security Assessment Report
- 5.61 Personal Response for a Vote Tabulation and Reporting System by Election Systems & Software
- 5.62 Brent Lawler's DIMS Project Files
- 5.63 Election Systems & Software
- E5.64 FWD:_ Instruction guide timeline
- E5.65 Who has responsibility for source information on races, candidate & issues
- E5.66 Voter Id Numbers for provisional Voters
- E5.67 TSx Upgrade Status
- E5.68 TSx Modems- Do not need to be purchased
- E5.69 TSx Inverter Upgrade
- E5.70- SOS guidelines on modeling election results
- E5.71 Revised Project Plan
- E5.72 Pricing on ST-100 card burner and VC Programmer
- E5.73 Planned Action Items for this Week
- E5.74 My Thoughts on where I should be directing my time
- E5.75 Minutes from Yesterday's meeting on GEMS Reports
- E5.76 Manpower Needs for L&A in Cuyahoga
- E5.77 L&A Test Script and Some performance issues
- E5.78 Warehouse status and charge _Discharge Concerns
- E5.79 Important-Gems data base load (May Election data base) import status
- E5.80- Generating Voter Access Cards- Getting DIMS software and support
- E5.81 Final Cuyahoga County Diagnostic Testing Counts
- E5.82 Equipments purchase decisions
- E5.83 Cuyahoga L&A Manpower Needs
- E5.84 Creating Voter Access cards for absentee voting on the TSxs
- E5.85 Daily totals for 12-16
- E5.86 TSX Inverter_Capacitor Problem
- E5.87 Testing Counts for 12-27, 12-28 & 12-29
- E5.88 Re_ Testing Counts for 12_30_05& 1_3_06
- E5.89 Daily Diagnostic Testing Totals for Monday 12_18_05. Also, IV&V Counts
- E5.90- Daily Counts for 12_15
- E5.91 RE_ your appearance at the Cuyahoga County GEMS training Classes week of January 23
- E5.92 Re- Website results export-fields snapshot
- E5.93 Re-Update
- E5.94 Re- status of Carts, VC Programmer, etc,-info needed for Cuyahoga meeting
- E5.95 FWD:-Printer Specifications
- E5.96 RE-Manuals on CD
- E5.97 Re-Diebold supplied staff for L&A
- E5.98 Re: Current TSx Upgrade Status
- E5.99 FWD:- Cuyahoga L&A Manpower Needs
- E5.100- FWD:-Cuyahoga County GEMS Ballot Creation Assistance
- E5.101 RE-Approach for AV on TSXs

E5.102 FWD:-Copyright question
E5.103 FWD:-Cart Prices
E5.104 FWD:-Ohio DESI Office Relocating
E5.105 Opem Records Guidelines cln (1-13-06)
E5.106 GEMS _1.18-Users_ Guide _Revision_12
E5.107 Ballot station
E5.108 AV-TSX-hardware guide 8.0
E5.109 Ballot -specifications-revisions-2.0
E5.110- GEMS_1
E5.111 Action Items List 12-20-05
E5.112 Review of Requested Changes to GEMS Reports 1-9-06
E5.113 Cuyahoga Training Plan course Descriptions
E5.114 Goodbye Elections, Constitution hello_
E5.115 Doug Jones-Security Analyses
E5.116 DIMS & GEMS Questions_1
E5.117 Responses
E5.118 locations with more than one word or city
E5.119 Units assigned to Woodbury
E5.120- send2fax1
E5.121 Dims issues 6-28-06
E5.122 Cuyahoga Draft Implementation Plan
E5.123 QC1
E5.124 ancillary equipment update
E5.125 GEMS usability
E5.126 [FWD: AEI_brookings election Reform Newsletter (6-21-06)]
E5.127 ATTN Austin procurement
E5.128 GEMS Card Cast Report wo provisionals
E5.129 GEMS Card Cast Report small
E5.130- GEMS Card Cast Report -5-19-06
E5.131 GEMS Card Cast Report -1
E5.132 132-4-3-2006
E5.133 Gems card Cast Report
E5.134 Re- Who has responsibility for source information on races, candidates & issues
E5.135 FWD:- Planned action items for this week
E5136 FWD- Need to get email setup for Jeff Gfeller
E5.137 For Lou, Dave K. and Like re storage of DREs
E5.138 Thanks you and a request
E5.139 another ballot order email
E5.140- ballot order and computer touch screen voting
E5.141 [FWD: re ballot order and computer touch -screen voting
E5.142 elect voting security
E5.143 Attn- Diebold Procurement
E5.144 attn -Lou
E5.145 Diebold Procurement.eml3
E5.146 Diebold Procurement.eml2
E5.147 Diebold Procurement
E5.148 Ohio Accumulation & Transmission Script
E5.149 Greater Cleveland Voting Co
E5.150- Diebold

- E5.151 Agreement with sole source letters-1
- E5.152 Re-panel request
- E5.153 Diebold-Our Votes+Government Spying (5 documents attached)
- E5.154 [FWD [PDA] No Confidence in CA50's Election]
- E5.155 ATTN Lou K. King County, Wash,-DIMS and GEMS
- E5.156 Cuy050206Contents Paper Tape
- E5.157 Cuyahoga Elections Review Panel-Ohio Board of Voting Machine Examiners
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SysTest Labs
216 16th Street • Suite 700
Denver, Colorado 80202
tel: 303/575-6881 • fax: 303/575-6882
www.SysTestLabs.com



*INDEPENDENT EVALUATION OF
ABSENTEE BALLOT SYSTEM*

**QUALITY ASSURANCE ASSESSMENT
REPORT**

Developed for:

CUYAHOGA ELECTION REVIEW PANEL

On Behalf of:

*CUYAHOGA COUNTY BOARD OF COUNTY
COMMISSIONERS*

July 14, 2006

SysTest Labs Document No. SL-06-G-COH-006, Rev 02

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Signoffs

Name	Role	Date	Signature
S. Candice Hoke	Election Review Panel Member		
Judge Ronald B. Adrine	Election Review Panel Member		
Tom Hayes	Election Review Panel Member		

Revision History

Version	Date	Description	Author
Rev 00	07/10/2006	Draft Release	SysTest Labs
Rev 01	07/12/2006	Final Release	SysTest Labs
Rev 02	07/14/2006	Updated Final Report to reflect receipt of additional documentation from the BOE regarding the primary activities required to conduct an election. Corrected various editorial typographical errors and omissions.	SysTest Labs

1 Introduction

Cuyahoga County experienced problems in the May 2, 2006 Primary Election following a conversion of the Diebold optical scan absentee ballot voting equipment from “precinct count” to “central count”. Reported pre-election day problems include:

- Failures in the ability of the Diebold optical to accurately scan absentee ballot voting equipment to read and/or process test decks from officially approved ballots.
- Insufficient time required for pre-election test activities for the specific election.

Cuyahoga County contracted with SysTest Labs of Denver, Colorado to assess contractor performance, Diebold AccuVote Optical Scan systems and operational readiness of the County Board of Elections to conduct future elections.

1.1 Purpose

This Quality Assurance Report summarizes the activities, procedures and major findings of SysTest Labs as a result of the Cuyahoga County Independent Assessment and System Testing.

1.2 Scope

The Cuyahoga County Board of County Commissions (CCBCC) and the Cuyahoga Election Review Panel (CERP) have requested that SysTest Labs provide the following services focused solely on ballot preparation processes, voting processes, counting processes, and equipment related to the absentee ballot system.

- Review the contracts governing the services performed by both the printer (MCR) and the voting equipment manufacturer (Diebold) to evaluate the level of compliance with terms and conditions related to the absentee system
- Review the requirements/specifications outlined in the RFP and evaluate each vendor’s performance against those requirements
- Review the requirements/specifications outline in the RFP and evaluate their alignment with the targeted business objectives
- Review the timeliness of any RFP, award of a contact and deliverables and quality of deliverables by the County and both vendors.
- Review and evaluate the quality of deliverables produced by each vendor and the effectiveness of the County’s review process
- Conduct absentee system testing for readers and ballots.
- Review accuracy of the printed ballots.

- Timeliness of ballot preparation by County staff
- Accuracy of ballot style for absentees.
- Position of timing marks on absentee ballots
- Election Day absentee ballot counting procedures.
- System testing with live ballots to determine of failure was the result of printer, ballot style, paper ballot, reader failure or calibration of machines by County staff and/or Diebold staff.

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85. *Optical Scan Test Deck Instructions, SOS/CCBOE, 4/24/2006*

86. *SOS Logic Accuracy Methodology Scenario, SOS/CCBOE, 4/24/2006*

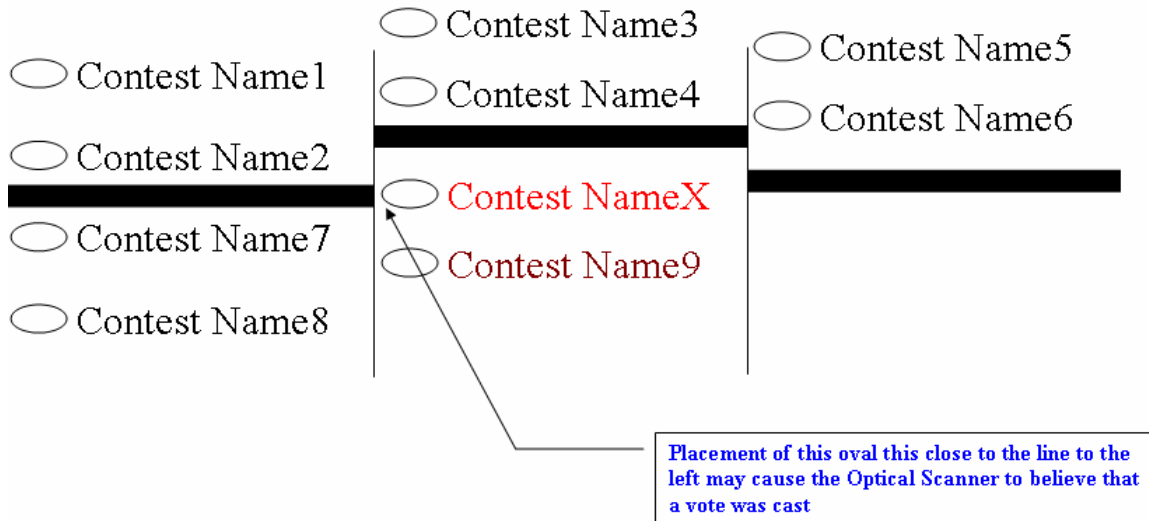
2 Executive Summary

Preparing for and managing a Cuyahoga County election is a very complex and challenging process. Many elements must come together in a timely fashion in order to ensure that all aspects of the election are ready on election day. This is true for both the electronic ballots and voting equipment used on election day at the polling places as well as the paper absentee ballots and the optical scanning devices used to read the paper ballots. Our assessment of the processes and equipment used to prepare and vote the absentee ballots for the May 2, 2006 Primary Election, in addition to the ability of the voting equipment vendor and printing vendor to meet their contractual obligations and county officials in performing the required duties have resulted in some significant findings. The detailed results of each aspect of our assessment are contained in either this report or in attached electronic files. However, the highlights of our findings are provided for in this Section.

2.1 Root Cause of absentee ballot issues

Results for both system testing and simulated elections have helped SysTest Labs to identify what we believe is the root cause of the failures of the ballots to be accurately read by the AccuVote Optical Scan equipment. From the various tests that were run that repeated the County's testing activities along with additional tests that were run using ballot styles taken from Lorain County and Montgomery County, SysTest Labs has concluded that the ballot style used for Cuyahoga County can cause the AccuVote Optical Scanner to report either inaccurate results or report unexpected vote marks on blank ballot pages.

Although the ballot layout and style used by Cuyahoga County is supported by and was developed using the Diebold GEMS Election Management System (EMS) and placement of the ovals on the ballots is consistent with Diebold's specifications for oval placement and well within tolerances, our testing has shown that the proximity of the ovals to the thick black lines separating the various contests on each paper ballot places the black lines within the tolerance area (0.125 inches from the left and right of the center of the voting position and 0.1 inches from the top and bottom of the center of the voting position). This placement, when the oval happens to be aligned with a black line separator from a column to the left of the contest, can cause the optical scanner to erroneously identify what it believes to be a marked oval. In Diebold's "Test" mode, when blank ballots are run through the scanner for testing purposes, this can cause errors in reading the ballots (the scanner is expecting no votes cast). Once the polls are open and actual voted ballots are processed by the scanners, this may cause inconsistent results. The following figure illustrates the explanation.



The ballots developed by the Ballot Department within the BOE were similar to the style recommended by the Ohio Secretary of State's office with a few exceptions. The lines shown for separating contests and other text were of a greater weight on the Cuyahoga County absentee ballots and the placement of the ovals were marginally closer to these lines. It is these differences that led to the issues with reading the absentee ballots. SysTest Labs obtained ballots developed for Lorain County and Montgomery County, both of which were developed using the GEMS EMS and were successfully read by the Diebold AccuVote Optical Scan devices used in these counties. The ballots for these counties used significantly thinner lines for contest and text separation and the ovals were placed approximately 1/4 of an inch away from the lines. Neither Lorain County nor Montgomery County experienced any difficulties in processing the absentee ballots. When ballots for Brookpark Precinct within Cuyahoga County were recreated using both the Lorain County and Montgomery County ballot styles and reprinted by MCR following the exact same process as that used for the original ballots, our testing found no issues in reading the blank ballots nor where there any inconsistent or inaccurate vote totals across Cuyahoga County's AccuVote OS machines.

SysTest Labs was unable to find any indication in the Diebold documentation that warns the user against placing the ovals for a printed absentee ballot to close to large black lines. However, the Diebold Ballot Specifications guide (item no. 41 in Section 1.3, Reference Documents) does specify that there is a tolerance area of 0.125 inches to the left and right of the center of the voting position and 0.1 inch above and below the center of the voting position. However, the ballot style and layout used by Cuyahoga County for the May 2, 2006 Primary was a valid ballot layout and style produced by the Diebold GEMS system.

2.2 Vendor Compliance

SysTest Labs' analysis of contractual documents, vendor provided deliverables, and interviews of key personnel from Diebold (the voting equipment manufacturer), MCR (the absentee ballot printer), and County Board of Elections (BOE) staff have shown that each Vendor has substantially met their contractual obligations.

Results for both System testing and simulated elections have helped SysTest Labs to potentially identify the root cause of the failures of the ballots to be accurately read by the AccuVote Optical Scan equipment. From the various tests that were run that repeated the County's testing activities along with additional tests that were run using ballot styles taken from Lorain County and Montgomery County, SysTest Labs has concluded that the ballot style used for Cuyahoga County can cause the AccuVote Optical Scanner to report either inaccurate results or report errors on the ballot pages.

Although the ballot layout and style used by Cuyahoga County is supported by and was developed using the Diebold GEMS Election Management System (EMS) and placement of the ovals on the ballots is consistent with Diebold's specifications for oval placement and well within tolerances, our testing has shown that the proximity of the ovals to the thick black lines separating the various contests on each paper ballot can cause shadows on the ovals when being read by the optical scan device. These shadows can cause the optical scanner to erroneously identify what it believes to be a marked oval. In Diebold's "Test" mode, when blank ballots are run through the scanner for testing purposes, this can cause errors in reading the ballots (the scanner is expecting blank ballots). Once the polls are open and actual voted ballots are processed by the scanners, this may cause inconsistent results.

The ballots developed by the Ballot Department within the BOE were similar to the style recommended by the Ohio Secretary of State's office with a few exceptions. The lines shown for separating contests and other text were of a greater weight on the Cuyahoga County absentee ballots and the placement of the ovals were marginally closer to these lines. It is these differences that led to the issues with reading the absentee ballots. SysTest Labs obtained ballots developed for Lorain County and Montgomery County, both of which were developed using the GEMS EMS and were successfully read by the Diebold AccuVote Optical Scan devices used in these counties. The ballots for these counties used significantly thinner lines for contest and text separation and the ovals were placed approximately 3/16 of an inch away from the lines. Neither Lorain County nor Montgomery County experienced any difficulties in processing the absentee ballots. When ballots for Brookpark Precinct within Cuyahoga County were recreated using both the Lorain County and Montgomery County ballot styles and reprinted by MCR following the exact same process as that used for the original ballots, our testing found no issues in reading the blank

ballots nor where there any inconsistent or inaccurate vote totals across Cuyahoga County's AccuVote OS machines.

2.3 Operational Assessment

Section 3.3 provides the detailed findings, conclusions and recommendations on a variety of operational issues that SysTest Labs considers to have contributed to the disappointing May election. Overall, our observations lead us to believe that corrective actions can be taken and would be welcomed.

2.3.1 Overall

The Operational Assessment of the Cuyahoga Board of Elections was conducted through interviews, observations and review of documentation provided to the SysTest team. It was our intent to conduct these interviews in a setting that allowed for the free flow of information from which we based a number of our findings and recommendations.

Critical to our process were the observations and unofficial conversations that we had with employees throughout the Board of Elections facilities. Hearing from those who actually perform the tasks and who have worked under the direction of multiple directors and/or Boards of Election, allowed us to form objection conclusions based on the diversity of opinions we encountered. It was never our intent to lead conversations, only to be open to the thoughts, concerns and solutions shared by the many individuals with whom we conversed during our stay.

Written documentation provided to the SysTest team was less than anticipated. The lack of formally written policies, processes and procedures or lack of knowledge of any written documented policies, processes and procedures confirmed our suspicions that institutional knowledge guides the day-to-day operations and organizational planning at the Board of Elections. Though our team recognizes the difficulties faced when new technology is introduced into traditional settings, we can not stress enough the importance of outlining policies and procedures in writing both for the sake of those giving direction, but more importantly for those who are implementing the new processes.

2.3.2 Timing of Ballot Testing and Preparation

One of the most publicly criticized processes within the BOE was the timing of activities involved in testing of the ballots and performing logic and accuracy (L&A) tests. SysTest Labs discovered through interviews that testing began on March 29, 2006, shortly before the absentee ballots were mailed to the voters, and that this initial testing was limited to confirmation that blank ballots could be read by one optical scan device in "Test Mode". It was reported that this test resulted in no errors although no test documentation exists to verify the results. Based on this test, the absentee ballot printer, MCR, was given the go-ahead to print, fold and stuff the envelopes.

Once the ballots were printed, folded and stuffed into envelopes, the BOE selected a random sample of these ballots and ran them through the optical devices, again, in the Test Mode. It was reported that this test resulted in no errors although, again no test documentation exists to verify the results. Based on these results the ballots were mailed to the voters.

The L&A Tests were not performed on the absentee ballot system until the weekend of April 28, 2006. Several factors contributed to the timing of this event, not the least of is that notification of a State Certified Central Count Server, a component critical to the absentee ballot system configuration planned for the May 2nd Primary, was not delivered to the Cuyahoga County BOE until March 23, 2006. In addition, the additional optical scanning equipment required for the absentee ballot voting did not arrive at BOE until April 14, 2006, the network components were not available for the BOE until April 19, 2006 and it took the both the County and the Diebold technician until April 28, 2006 to configure and connect the absentee ballot system to the Central Count server. Regardless of the availability of printed absentee ballots for L&A testing, L&A testing could not be completed for the absentee ballot system until well after the ballots had to be mailed to the voters.

3 Quality Assurance Study - Results and Recommendations

3.1 Vendor Compliance Review

SysTest Labs completed a review of the two (2) major contracts involved with the conduct of the absentee ballot process for the May 2, 2006 primary election in Cuyahoga County, Ohio – Diebold Election Systems (hardware and software) and MCR (local printing). A traceability matrix was prepared to allow the comparison of the Request for Proposal requirements with the actual performance and delivery activities and is included in this Report as Appendix C.

A letter requesting information from the Ohio Secretary of State's office was sent on June 6, 2006 requesting copies of 6 of the 10 deliverables described in Section 2 of the RFP that lead to the selection of Diebold. These deliverables included:

- 2.a Work Breakdown Structure (WBS) and Deployment Schedule (Deliverable 1)
- 2.c Validation of State's requirements (Deliverable 3)
- 2.d Installed and configured DRE, PCOS, ABS and EMS system (Deliverable 4). If this can be separated into absentee ballot System (ABS) and Election Management System (EMS) components, that would serve our purposes.
- 2.e Documentation. If this can be separated into absentee ballot System (ABS) and Election Management System (EMS) components, that would serve our purposes.
- 2.g Training
- 2.i Election Administration Support

Secondly, SysTest Labs requested copies of the following Qualification and Certification Reports for the absentee ballot voting equipment and related software used in the recent May primary election:

1. Independent Test Authority (ITA) Qualification Report(s)
2. State Certification Report(s)

These reports provide information regarding the specific voting equipment and software configurations qualified by the ITA and certified by the Secretary of State's office to be used in elections within the State of Ohio. These reports would allow SysTest Labs to confirm that all equipment and configurations used by Cuyahoga County were both qualified and certified.

Subsequently, SysTest Labs requested copies of the IV&V reports conducted by a contractor for the Secretary of State on the Diebold Accuvote OS devices that

were delivered in two (2) batches to Cuyahoga County. This request was made on June 21, 2006.

As of July 14, 2006, SysTest Labs has not received either the Qualification and Certification Reports or the IV&V reports.

However, SysTest Labs did receive some of the requested information directly from Diebold, so we were able to complete portions of the traceability matrix that is attached as Appendix C.

3.1.1 Vendor Relationships

In our observations and discussions, the vendors who work with the Cuyahoga Board of Elections expressed difficulty in maintaining respectful and positive working relationships. Vendor recommendations are not always followed. The lack of project planning creates tension with the election vendors.

Recommendation: Consider vendor recommendations and select those that make operational and economic sense to the BOE. Creation and adherence to Master Project Plans which incorporate the Secretary of State's election calendar is also recommended.

3.1.2 Diebold Compliance Matrix

No major discrepancies were found in Diebold's contract performance. However, the following items were identified as potential issues. Due to non-receipt of the requested reports from the SOS office, SysTest Labs was unable to confirm items 1 and 2 shown in Exhibit 1 - Diebold Compliance Matrix.

Item 3 has the potential for turning into a significant discrepancy. SysTest Labs was unable to determine if the ballot style used by Cuyahoga County was tested in ITA Qualification or State Certification or if Diebold was aware of the potential for reading errors using this ballot style. Regardless, SysTest Labs believes that if Cuyahoga County's BOE Ballot Department staff had been trained in the use of GEMS prior to having created the ballots for the May Primary, the ballot styles would have more closely resembled the SOS's recommended ballot style and the absentee ballot issues may have been avoided.

Exhibit 1 - Diebold Compliance Matrix

Item	RFP/ Contract Requirement	Discrepancy Description	Recommendations
1.	All hardware and software components of the proposed system, including provisions for absentee voting and voters with disabilities, must comply with the FEC Voting System Standards. All hardware shall have achieved compliance at the time that the	Exception - documentation requested but not provided by SOS	Timely compliance by SOS office to requests from Election Review Panel

Item	RFP/ Contract Requirement	Discrepancy Description	Recommendations
	<p>proposal is submitted. Software and firmware shall have been submitted to the appropriate Independent Testing Agency (ITA) at the time the proposal is submitted, as evidenced by a letter from the ITA indicating receipt, and testing must be completed. The proposal must contain a copy of a letter to each ITA authorizing the ITA to release to the State any records or test results related to the proposed voting system (Page 17)</p>		
2.	<p>Independent Test Authority. All equipment and software proposed must be qualified by an ITA or currently pending ITA qualification provided the system has successfully completed the source code review portion of the testing. The ITA certification must be demonstrated with a copy of the qualification certificate issued by NASED approved ITA, or documentation from a NASED approved ITA that the system is pending qualification and that the source code review portion of the testing is complete and satisfactory, must be included in the Executive Summary, along with signed authorization directing the ITA that performed or is currently performing the qualification testing.</p>	<p>Exception - documentation requested but not provided by SOS</p>	<p>Timely compliance by SOS office to requests from Election Review Panel</p>
3.	<p>absentee ballot System (ABS) systems should accurately report all votes cast. (Page 18)</p>	<p>Exception – Used the GEMS EMS to create Cuyahoga County ballots in a ballot style that was provided by GEMS. This style resulted in ballots that,</p>	<p>Formal training of Ballot Department employees by Diebold on GEMS system. (This was completed during the week of June 26, 2006). Support from Diebold for the general election in November</p>

Item	RFP/ Contract Requirement	Discrepancy Description	Recommendations
		when read by the Diebold AccuVote Optical Scan device, caused erroneous and/or inconsistent results.	2006. A new contract with Diebold may be required to accomplish this recommendation.
4.	Provisional Voting. Offerors shall discuss how their DRE, precinct count optical scan, and ABS voting equipment, as well as the EMS, can separate provisional ballots from non-provisional ballots cast at the precinct on Election Day and discuss how results from provisional ballots can be easily downloaded into the final tally of votes if those provisional ballots are determined to be eligible for counting.	Exception. - Unable to determine from Diebold documentation how these required election functions were accomplished.	Diebold document a formal process as prescribed by the Ohio Secretary of State.
5.	Attachment 4. To confirm successful installation and configuring of all DRE, precinct count optical scan, ABS and EMS systems, the Vendor will: <ul style="list-style-type: none">• Comply with all delivery and set-up dates detailed in Attachment 10; and• Prepare, assure completion of and submit a checklist filled-in and signed by a duly authorized State representative attesting to the successful installation, configuration and testing of equipment at each location. (Page 25).	Exceptions - delivery and testing documentation not available. Diebold formal Work Breakdown structure not provided. Several versions have been reviewed. Unable to find delivery confirmation for second shipment of 15 OS devices. Unable to document testing checklist.	Timely compliance by Diebold and the Ohio Secretary of State's office to requests made by the Election Review Panel.
6.	8. Describe in detail the method for handling recounts on each Voting System. Electronic recount? Manual recount? Can each voter's ballot image be reproduced as is? If so, does voter anonymity remain in	Exception. Available Diebold documentation does not describe these processes. County processes unavailable as well.	Diebold document a formal process as prescribed by the Ohio Secretary of State.

Item	RFP/ Contract Requirement	Discrepancy Description	Recommendations
	place? (Page 25)		

3.1.3 Diebold Training Compliance Matrix

Diebold generally complied with the requirements of the Master Contract with the Ohio Secretary of State's office and offered all of the required training. However, Cuyahoga County opted to customize the training program and did not fully utilize the services offered by Diebold in several instances (See the Operational Assessment for details). The training compliance matrix is incorporated into this report in Appendix C as a table. Two exceptions were noted in the SysTest Labs review:

Item	RFP Training Requirement	Diebold RFP Response	Not Achieved
1.	+ Positive Diebold RFP Response - Not Achieved		
2.	• Conduct of a recount	+	-
3.	• Conduct of a contested election	+	-

3.1.4 MCR Printer Compliance Matrix

Several exceptions were noted regarding ballot delivery dates. However, the data suggests that the delays were primarily due to County editing and ballot correction rather than issues with MCR. We have not confirmed two activities outlined in the RFP:

Item	RFP Section	RFP Requirement	Issue description	Recommendations
1.	3	CCBOE will provide a file from past elections for the vendor to provide 20 proofs of precinct OS ballots and 20 proofs of absentee ballots	Documentation not available to confirm this activity	CCBOE provide documentation of this activity.
2.	7	Final inspection of the printing equipment and supplies. No ballots to be printed until final approval granted by BOE.	Documentation not available to confirm this activity	CCBOE provide documentation of this activity.

Recommendation. One recommendation that would improve the County testing process for future elections would be to require that all initial ballot test decks arrive at least six (6) weeks prior to the election for Logic and Accuracy Testing.

This was suggested by MCR in their correspondence to the Cuyahoga Election Review Panel on July 5, 2006 and SysTest Labs endorses that recommendation.

3.1.5 Timelines

Ohio of Secretary of State (SOS), Cuyahoga County and Diebold created several different timelines for the entire election process. These versions included:

1. 2006 Ohio Election Calendar – SOS
2. 2006 Implementation Calendar (beginning in 2005) – Cuyahoga County
3. May Primary 2006 Voter Education Plan – Cuyahoga County
4. May 2, 2006 Master Project Plan – Cuyahoga County
5. Cuyahoga County Optical Scan Timeline – Cuyahoga County
6. Cuyahoga Calendar of Events Leading To May 2 Election Day – May 9, 2006 – Diebold. This is a recap of events, not a project timeline.
7. Training Implementation Plan – Cuyahoga – May 06 – Diebold
8. CCBOE Imp. Project May – Diebold

The primary issue with these diverse schedules from multiple sources is that a single project plan with management sign-off was never created. This lead to lack of coordination of key activities required to complete all required activities in a timely manner.

Recommendation. SysTest Labs recommends that the CCBOE create a single, master election project plan that includes all major activities for all entities including SOS, hardware/software vendors, printers and other election supply vendors. A Project Management Office (PMO) should be established at the CCBOE and accountable to the Director and Deputy Director. A formal process with sign-offs and exceptions documented should be implemented for the next major election cycle.

Milestone and completion charts should be posted in each major department and updated on a regular basis. This should conform to the SOS election calendar, Cuyahoga County implementation calendar and master project plan. Weekly status meetings should be established and each department held accountable for projected milestones. Missed deadlines should be escalated with forecasted impact and proposed resolution included.

3.2 System Testing and Simulations

As indicated above, SysTest Labs developed a Master Test Plan that consisted of eight (8) separate tests using the Cuyahoga County AccuVote OS systems provided by Diebold. The tests were conducted in both precinct and central counts modes. All tests were conducted at the County Board of Elections

facilities in Cleveland, OH. The following provides a summary of those testing activities:

3.2.1 Precinct Count Mode

SysTest Labs used three (3) OS units – two from the initial shipment of five (5) and one from the second shipment of fifteen (15) units.

3.2.1.1 Test One – Precinct Mode.

Three machines indicated actual votes on blank ballots:

Serial Number	% of Errors
37741	8.5 %
31038	3 %
37730	45 %

3.2.1.2 Test Two

The results from Test 2 were used to verify the process used in Test 1 (and subsequent tests) as well as the results from Test 1.

3.2.1.3 Test Three – Precinct Mode, Custom Voted Ballots

Of the three optical scan devices used for this test, the results from one of the machines did not match the expected vote counts. SysTest Labs believes that this is related to the ballot style.

3.2.1.4 Test Four – Precinct Mode

SysTest Labs used the same three units indicated in Test One with the Brookpark precincts 1 – 4 (same used for County Logic and Accuracy Tests. Inaccurate results were indicated on one of the three machines including under votes and over votes.

3.2.2 Central Count Mode

3.2.2.1 Test Five – Central Count Mode

SysTest Labs used seventeen (17) machines configured in central count mode with the same Brookpark test deck described in Test Four). 70.6% (12/17) reported inaccuracies in the 87 races contested:

Serial Number	Test Results
37747	Accurate Vote Count
38896	Accurate Vote Count

Serial Number	Test Results
31039	Accurate Vote Count
40450	Accurate Vote Count
38654	Accurate Vote Count
31055	Inaccurate Vote Count
38671	Inaccurate Vote Count
37674	Inaccurate Vote Count
31110	Inaccurate Vote Count
31397	Inaccurate Vote Count
40409	Inaccurate Vote Count
31060	Inaccurate Vote Count
31047	Inaccurate Vote Count
37730	Inaccurate Vote Count
31048	Inaccurate Vote Count

3.2.2.2 Test Six – Central Count Mode

Inaccuracies were detected in that in races that were not voted, certain candidates received votes.

3.2.2.3 Test Seven – Central Count Mode, Election Simulation

Of the three optical scan devices used for this test, the results from one of the machines did not match the expected vote counts. SysTest Labs believes that this is related to the ballot style.

3.2.2.4 Test Eight – Ballot Style Comparison

SysTest Labs has recommended a series of follow-on tests using a different ballot design. When SysTest Labs reviewed the February 2006 Cuyahoga County OS ballots and ballots created for both Montgomery and Lorain Counties, Ohio for the May 2006 primaries, it was observed that the oval used to indicate a vote for a candidate or yes/no for an issue was one column to the right of the position selected by Cuyahoga County for the May 2006 election. In combination with a thick black, horizontal line used to separate races/issues, the position of this blank oval may cause “phantom” votes to be counted or other inaccuracies to occur.

These tests involve the use of two new ballot designs using the Brookpark ballots from May 2006 primary to create two (2) new sets of test decks following both the Montgomery County and Lorain County styles. SysTest Labs will then conduct another series of test with these new “decks” in both central count and precinct

modes. This will allow the determination to be made if the inaccuracies encountered are actually a result of the ballot design. We expect to conduct these tests during the week of July 10, 2006 and will update this draft report with those results.

SysTest Labs used five (5) machines configured in central count mode with the same Brookpark test deck described in Test Five printed using the ballot styles used at Lorain County and Montgomery County. There were 0% reported inaccuracies in the 87 races contested.

Serial Number	No. of Tally Errors or Inconsistencies
S/N 40409	0
S/N 31110	0
S/N 31397	0
S/N 37730	0
S/N 31060	0

SysTest Labs used two (2) machines configured in precinct count mode with blank Brookpark test deck printed using the ballot styles used at Lorain County and Montgomery County. There were no errors in reading the ballots.

Serial Number	% of Errors
S/N 37741	0%
S/N 31038	0 %

SysTest Labs believes that the inaccurate voting results that were observed in both central count and precinct count modes may be due to ballot design, as opposed to printing quality or machine defects.

The optical scan ballot pages produced by MCR for the May 2, 2006 election were produced well within the tolerances specified by Diebold and attached by Cuyahoga County to the ballot printing specifications, even accounting for minor deviations that may have been due to the conversion from GEMS to Adobe Acrobat (.pdf) files.

3.2.3 Issues

3.2.3.1 Full Memory Card

The AccuVote Optical Scan system does not provide an error message if the 128KB memory card is full and is unable to record additional votes.

3.2.3.2 User Guides

The AccuVote OS Users Guide does not accurately reflect the actual AccuVote optical scan procedures required to open and close an election. SysTest Labs followed the AccuVote OS User Guides provided to the County for the processes of opening and closing an election. We were unable to correctly open and close the election using the steps defined in the User Guides.

3.2.3.3 GEMS Audit Log

The GEMS Audit Log process, in the Central count configuration, failed to capture an attempt to vote with an invalid ballot. This is a requirement from the Voting Systems Standards, Version 2002.

3.2.4 Recommendations

SysTest Labs recommends that the Cuyahoga County Ballot Department avoid using the ballot style used in the May 2, 2006 Primary Election and follow the ballot styles adopted by Lorain County.

SysTest Labs recommends that the Cuyahoga County Board of Elections and the Secretary of State's Board of Machine Examiners discuss with Diebold the following issues:

- the lack of a warning message for a Full 128KB Memory Card
- accuracy of User Guide instructions
- missing audit log entry

3.3 Operational Assessment

The operational assessment was intended to ascertain if the county's processes and procedures were either complete or sufficient enough to support effective preparation for a Primary or General Election. The following items are detailed findings, conclusions and recommendations on a variety of operational issues that SysTest Labs considers to have contributed to the disappointing May election process. Over all, our observations lead us to believe that corrective actions can be taken that would help to ensure that the issues encountered in preparation for the May Primary are not repeated for any future elections.

3.3.1 Lack of Knowledge of documented processes and procedures

One of the greatest issues within the BOE organization is a lack of knowledge by the workers that certain processes and procedures exist. When the Department Managers and Assistant Managers were asked by SysTest Labs if documented processes and procedures were available for our review, we were told that they did not exist. Though numerous requests were made to secure what documentation exists, to date only those in place for Booth Officials and Voter Outreach were provided to the SysTest Labs team and not until July 11, 2006 did

we receive any additional documentation and those that were received had not been reviewed and/or updated in over 3 years. Subsequently to July 11, 2006, SysTest Labs received a great deal of documentation from the Director of Election and the Deputy Director of Elections regarding the primary activities required to conduct elections. The documentation received from the Director of Election and the Deputy Director of Elections has been summarized in Appendix F.

Institutional memory and reliance on “how we’ve always done things” plagued the implementation of new systems and procedures.

Recommendation: SysTest Labs cannot stress enough the need for process and procedure documentation referencing the statutes and directives that guide their implementation. In addition, training, use, and continuous improvement of the process and procedures must be enforced throughout the organization.

3.3.2 Delay in preparation Central Count

The inability of the memory cards to handle the complex election anticipated in May was discovered as early as November 2005. On December 28, 2005 twenty additional optical scanners were requested from the Secretary of State office presumably to be used in Precinct Count configuration. On March 23 it was determined that even with the additional units, there was not enough room on the memory cards to handle the 2,000 different ballot styles and that pre-sorting the voted absentee ballots by ballot style would be extraordinarily time consuming and inefficient. Diebold suggested going to Central Count configuration, an option that had not been previously identified. The certification by the Secretary of States Office of the Central Count configuration was not finalized with the Cuyahoga County Board of Elections until March 23, 2006. Implementation of this configuration required the Diebold technicians to attend specialized training which took place on April 22, 2006 in Canton, OH.

Fifteen optical scan units were delivered to Cuyahoga County on April 14. No documentation verifies whether or not these units received IV&V. Additionally, the bill of lading, that SysTest Labs was given by Diebold did not identify serial numbers of the machines delivered and the person who actually signed the delivery receipt can not be identified as an employee of the BOE. It is our belief that this was not the appropriate document.

On April 7 it was determined that a network switch, cables and connectors were required to complete the Central Count configuration. Diebold provided the BOE with a list and price for the required ancillary supplies. It was not until April 10 that Diebold answered the BOE’s request to confirm the equipment list was correct, thus further delaying the ordering of the equipment. Because the cost exceeded \$15,000, the requirement to utilize the bid process using the “lowest and best” award practices caused delay in the purchase of the supplies needed. The bid was awarded to CDW and delivery of these supplies was made on April 24 and April 25. Although it was believed that the OTS (off the shelf) ancillary

supplies purchased from CDW would adequately address the configuration needs, additional wiring and reconfiguration was required to accomplish this effort.

After gaining assurance from Diebold that the BOE had everything needed to support the Central Count configuration; it was on April 26 discovered that a "Batch Start Card" was required to begin the Central Count process. This was requested from Diebold and delivered to Cuyahoga County BOE on April 27.

Recommendation: Since the May 2 election critical staff has attended further training on the GEMS system. It is SysTest Labs's recommendation that ongoing training be provided and that Cuyahoga BOE elicit assistance from Diebold in ballot creation, especially so for the November election.

3.3.3 Incomplete training of permanent and temporary staff

Training inadequacies are evident throughout the organization from ballot design and preparation to training of Booth Officials and Election Day Technicians.

Bob Baker, hired on November 22, 2005, stated that he was not properly-trained for the efforts he was asked to undertake. Although his credentials included election support for five Ohio Counties as a contractor for Diebold, he had not received Diebold training on either the DIMS (Data Information Management System) or GEMS (Global Election Management System).

Booth Official training needs were identified in a preliminary meeting held with Diebold on December 12. It was determined that a Train the Trainer program would need to be implemented and Diebold recommended their five day course which they believed would provide the training needed for the trainers to be competent to train the 6,000 plus Booth Officials for the May 2006 election. Retired teachers were identified to be the appropriate candidates for this effort and forty were selected and secured by the Booth Official department. On February 24, Mr. Thomas met with Diebold to discuss the specifics of this training. The recommended training schedule was modified by the BOE Director and reduced from five days to two and one half days. When the training actually took place, a power outage on day one caused the training to be cancelled resulting in the Train the Trainer program to be condensed into one and one half days from the recommended five.

In as much as Diebold provided the Cuyahoga BOE their completed Booth Official training manual and an Election Day Quick Reference Guide, in January it was determined that Cuyahoga County would produce a customized training manual. Pam Heschel of ITC, Inc was hired to create the manual as well as to assist in developing the Train the Trainer program. Delays in printing the training manual abound. The BOE suggests that Diebold was uncooperative in providing the artwork requested and Diebold counters saying the requests were untimely and from their perspective unnecessary given the fact that they willingly offered their training documentation. Multiple drafts were created and ultimately the BOE

Director took responsibility for final edits and proofing for print. When the Booth Official training classes began on March 20, the training manuals were incomplete or not available for distribution, consequently some Booth Officials did not receive manuals until they were mailed to them well after the fact.

Booth Official training followed the same timelines as training in the past even though new voting equipment was being used countywide for the first time. Three hour training sessions were planned with attendance limited to approximately thirty people per class. 320 classes were scheduled during the six weeks prior to the election. In one interview with BOE staff the first days of training were categorized as “disasters”. The trainers were not prepared and the materials were not available There was a reported drop out rate of three hundred Booth Officials after they had attended the training.

Once it was identified that the complexities of the TSx machines to be used at the polling places far surpassed the abilities of traditional poll workers (Booth Officials) Cuyahoga BOE agreed to hire Election Day Technicians (EDTs) to be present at each of the 578 sites. EDTs were recruited and hired by the BOE Administrative Assistants, mitigating the role of the Booth Official department and infusing non-election oriented personnel into an already contentious mix. In addition to the standard three hour training attended by all Booth Officials, EDTs were provided and additional two hours of training in order to troubleshoot machine malfunctions on Election Day. Shortfalls of the EDT training include a lack of troubleshooting techniques, in that problem scenarios could not be created on which to train, as well as limited knowledge by some of the trainers of TSx operations. The amount of phone calls from polling locations the morning of the election indicated to the BOE that some polling locations were unprepared to open the polls without assistance, Diebold, who per there contractual obligations supplied trained personnel to assist at the polling sites. The BOE had understaffed their call center, and so, poll workers, finding the Diebold help center number in their documentation, placed calls directly to Diebold.

Recommendations: DIMS and GEMS training for the BOE Ballot department staff.

Follow the Diebold recommended training for the Train the Trainer and Poll Worker training programs.

Establish a project plan for the creation of all training documentation. Bring in volunteer, experienced poll workers to run through the documentation for comprehensibility in a practice election day environment before documentation publication.

The Booth Officials department should qualify, hire, and train potential EDTs. It is also recommended that the 17 year old poll workers with technical understanding be allowed to fill the EDT positions.

The BOE should have a plan for worse case senarios for the opening and closing of the poll locations and have alternative plans in place.

3.3.4 Use of Temporary Workers

In the Candidate/Voter Services department, training concerns are also evident. No documentation was provided of written guidelines, policies and/or procedures for the qualification and input of voter registration applications, absentee ballot applications, or signature verification on returned voted absentee ballot secrecy envelopes. This lack of documentation leads us to conclude that the “tribal knowledge – institutional memory” training prevails and that OTJ (on the job training) is what directs the processing of these critical functions throughout this department.

In as much as temporary workers required for voter registration and absentee ballot processing tasks are needed to handle the volume in these activities, it appeared that they were individually allowed to qualify applications and to verify signatures for absentee ballot qualification. Traditionally a bi-partisan team should be assigned this important final step before voted absentee ballots are approved and readied to be counted.

Recommendation: SysTest Labs recommends that all policies and procedures be documented and reviewed for adherence to Ohio law. Signature verification criteria should be well documented and training should take place specifically on this function. Bi-partisan review of registrations, applications and signed affidavits should be standard practice.

3.3.5 Lack of Overall Detailed Project Plan

Project plans and timelines were made available to our team from the Director and Assistant Director which revealed how uncoordinated the overall election planning was. Early deadlines were missed resulting in an ongoing effort to try to catch up. The most clearly defined and adhered to plan was that created for Voter Outreach. Over 600 demonstrations were scheduled and took place between June 2005 and the May election. Eleven full time personnel were dedicated to this effort in addition to ten temporary staff that were primarily recruited from the Booth Official pool of employees. Additionally, a county-wide mailer was sent providing instructions to voters about Election Day voting and their precinct location assigned.

Recommendations: SysTest Labs recommends that training be provided to departmental managers and assistant managers on project management and plan documentation. Each department should identify its various responsibilities and document all policies and procedures for reference and training purposes.

3.3.6 Qualifications of Temporary Workers

As we understand, the temporary worker classification is a long-standing tradition in Cuyahoga County and one utilized throughout the BOE. Certainly the increased workload prior to and immediately following any election gives cause to have temporary workers, but it was unclear to our team the advantage of

employing so many “short term employees” at crunch times in lieu of having better trained permanent staff which would provide greater continuity and professional work practices on the efforts that are truly year round responsibilities.

Take for example Booth Official recruiting. There are four full time employees and one manager assigned to the recruitment of Booth Officials. Prior to each election, temporary employees are brought in to assist the full timers in recruiting the 6,000 or so Booth Workers required for a county-wide election. These temporary workers are assigned particular districts, i.e. cities and/or wards in which to recruit. Prior to each election and after politically appointed Booth Officials are identified each potential Booth Official is called on the phone, assigned to a polling location and assigned for training. Correspondence is mailed to the Booth Officials and a signed confirmation is returned to the department by the Booth Official acknowledging their commitment to attend training and work at the polling location assigned. Given the complexities of this important function and the benefit of securing long term commitments from Booth Officials, it would seem reasonable to annually identify Booth Officials, appoint them for each applicable election in a year’s time and strive for continuity and commitment from those willing to work each year. Instead, the four full time employees spend considerable time training the temporary workers on the logistics of recruitment and assignments. They have minimal control over who is called once cold calling begins and their oversight is compromised by the turnover in staff assigned to their department.

These temporary workers were also assigned to the help desk on Election Day to troubleshoot problems at the polling locations. Insufficient training was evidenced by their inability to walk Booth Officials through processes, as they themselves had not received adequate training on the TSx equipment. Excessive calls to the help desk overwhelmed the staff and resulted in phone lines ringing busy for other Booth Officials attempting to get assistance.

Recommendation: Minimum standards should be identified for temporary workers and strictly adhered to. All temporary workers should receive thorough training in their respective areas and be provided written direction as well as documented policies and procedures.

3.3.7 Maintenance and Storage of Equipment

Issues that came to our attention were more logistical than operational in that 5,406 TSx machines take up a tremendous amount of space and require multiple stages of preparation prior to each election. The need for additional power became evident upon delivery of the machines as each unit had to be powered, drained and re-powered prior to delivery to the polling locations. Additionally, each machine had to be tested for logic and accuracy and then programmed with the scripts provided by the Ballot Department.

Multiple unit transport and storage carts are in use, however not enough have been purchased to store every unit. Use of these carts greatly reduces the opportunity for damage both at the warehouse and in transporting equipment to the polling locations.

A wet sprinkler system is in use in the warehouse and should it be activated, the damage would be significant.

On June 27th SysTest Labs visited the warehouse for a second interview and observed a security breach:

When the buzzer was not answered at the front door an employee from a different office in the building allowed us to 'piggy-back' into the building when she opened the secured door with her pass key. When we got to the second floor we were allowed entrance into the warehouse as a temporary worker opened the secure door to leave on a break. We entered the warehouse and walked into the offices unchallenged.

Recommendation: Additional storage carts should be purchase as soon as possible. The warehouse should either be retro-fitted to a dry sprinkler system and/or water proof covers purchased that would cover the storage carts.

Tighten and adhere to security policies.

3.3.8 Delay in L&A Testing

Logic and Accuracy (L&A) testing was significantly delayed for the TSx units as ballot scripts were not made available until April 12. Early scripts were inaccurate and confusing and have to be rewritten for programming. The delays compounded the urgency of testing and Election Day programming requiring multiple shifts scheduled to complete this function. Temporary staff as well as other BOE employees, i.e. Comptroller, were recruited to assist in the effort. On the job training was the method employed to complete this critical function.

Diebold warned the BOE that the delay caused by the TSx L&A testing would have negative ramifications on the Optical Scanner testing. All manpower was diverted from the OS testing to the TSx testing.

Recommendation: SysTest Labs encourages the BOE to establish timelines that are realistic and allow for systematic and well supervised testing and programming of the TSx units. Training should be provided well in advance of the actual testing and those who participate should receive written documentation on testing and programming procedures.

3.3.9 Delay in receipt of Final Test Desks for AccuVote OS System

The fact that the test decks for the optical scan system were not received until days before the election is incomprehensible. No ballots should have been released to voters until all programming and testing had been completed. As we understand it, the only testing done prior to the mailing of the absentee ballots

was to make sure that they were accepted by the optical scanners and that the counter incremented accordingly. No predetermined tests were run on marked ballots to ensure that the votes were being recorded correctly. Had this testing taken place prior to the mailing of ballots the inaccuracies found when testing did occur the day before the election, could have been identified and remedied well in advance.

Recommendation: SysTest Labs suggests that testing of any and all optical scan ballots and equipment be scheduled to take place well in advance of ballot distribution to the public. Test decks should be created and tested prior to printing any and all additional ballots. Testing must include voted ballots, ballots that have been folded for mailing as well as blank ballots. A test plan should be written and followed. All tests run should be logged and results documented in writing. Test decks, results and documentation should be sealed and secured for use in Election Day testing and post election testing of equipment. Each and every optical scan device should be tested using consistent procedures.

3.3.10 Machine Security on Election Day

TSx machines are programmed prior to the delivery to the polling locations. Once programmed the machines are sealed with tamper tape and security seals. The tamper tape and the seals are purchased for an election supply company and though the supply company monitors their sales, realistically these supplies could in the possession of almost anyone. Though the security seals are numbered, these numbers are not tracked when the machines are sealed nor are they verified when the seals are broken at the polling locations.

Recommendation: SysTest Labs recommends that customized security seals and tape be purchased and that all security seal numbers be recorded when the units are sealed and verified by the Booth Officials at the polling locations when the seals are broken. Due to the large number of TSx devices used in Cuyahoga County, we recommend the customization include a bar code that can be tracked electronically.

3.3.11 Security for Precinct Material Bags

Precinct material bags are sealed with the same or similar security seals addressed in 1.1.1.10. Numbered seals are used, however no tracking is done to ensure that the bags have not been opened once transported to the polling locations and sealed again by someone other than an election official.

Recommendation: SysTest Labs recommends that customized security seals be purchased and that all security seal numbers be recorded when material bags are sealed and verified by the Booth Officials at the polling locations when the seals are broken. Due to the large number of material bags used in Cuyahoga County, we recommend the customization include a bar code that can be tracked electronically.

3.3.12 Location of Election Supplies

Post election observations revealed that election supplies were located in a variety of places throughout the BOE facility. Inventory and security seemed to be relatively haphazard.

Recommendation: Because of the inadequacy of storage at the BOE facility, perhaps a centralized location in or near the warehouse would better serve this function. In this regard, transport of the supply bags from the BOE to the warehouse would be eliminated and all items could be stocked, inventoried and secured in one central location.

3.3.13 Instructions on Absentee ballots and Pamphlets

Voter instructions included with the absentee ballots failed to address the requirement that the ballot stubs not be torn off or separated from the ballots. Because the voter's identity and mailing address were printed on these stubs, voters understandably were confused and some removed the stubs unaware that their ballots would be disqualified and not counted. Review of ballots from other counties showed that the instructions "Important - do not removed ballot stub" was printed on each of the ballot stubs. This was not the case in Cuyahoga County.

Another problem with the instructions arose with the fact that the instructions state that the ballots can only be filled in using a black or blue ballpoint pen. According to the SOS (and the ballots from Lorain and Montgomery Counties) a #2 pencil is also allowed. Ballots were initially withheld because they had been filled out with pencil.

Recommendation: Firstly, no individual's information should be printed on the ballot and/or ballot stub. The voters identifying information should be printed on the reverse side of the ballot secrecy envelope so that once the ballot is removed from that envelope no identifying information is available on the ballot. Secondly, both the instructions and the stubs of the ballot should have instructions to the voter that removal of the stubs will cause the ballot not to be counted. Thirdly, the instructions should read, "Use a blue or black ink pen or a #2 pencil to fill in the oval".

3.3.14 Transport of Voted absentee ballots

In our interviews we were informed that absentee ballots that could not be qualified due to incomplete information and/or signature variances were first reviewed by the Candidate/Voter Services manager and/or assistant manager and then, if not resolved, were delivered to the Director's office for review by the Director and/or Assistant Director for qualification. It was explained that a transmittal sheet accompanied the ballots, but it was unclear whether the ballots were tracked by number in the batch or by individual voter name. Regardless,

the ballots left Candidate/Voter Services department for an undisclosed period of time while being reviewed.

Recommendation: At no time should voted absentee ballots be out of the control of Candidate/Voter Services department until they are transported to the Tabulation Room for counting. Written procedures must be developed and strictly adhered to prevent any speculation of improprieties.

4 Vendor Compliance Review Methodology

SysTest Labs' vendor compliance thread was designed as a detailed review of the contractual relationship between the Cuyahoga County Board of County Commissioners and /or the Cuyahoga County Board of Elections and its primary vendors for voting equipment and ballot printing. The methodology was designed to both identify and remediate the issues defined by the CCBCC and the CERP. Specifically our vendor compliance thread assessed the following areas of need as identified by the Board of Elections:

1. Contract Review. Review the contracts governing the services performed by both the printer and Diebold to evaluate the level of compliance with terms and conditions related to the absentee system
2. Vendor Performance. Review the requirements/specifications outlined in the RFP and evaluate the vendor's performance against those requirements
3. Timelines. Review election project plans and vendor's compliance
4. Deliverable Review. Review and evaluate the quality of deliverables produced by the vendor and the effectiveness of the County's review process

The specific activities that SysTest Labs engaged in to complete this area of work include:

4.1 Contract and RFP Review Activities

SysTest Labs reviewed Diebold's response to the RFP and the contracts from both Diebold and the county's chosen vendor for printing ballots. As part of the review, the team developed a contractual obligations matrix (Appendix C - Traceability Matrix) to determine whether the vendors met the stated requirements. SysTest Labs also interviewed the County's Contracting Officer to discuss and clarify various contract terms and other specifics related to the two contracts. SysTest Labs analyzed this information to identify problems with the existing contracts and also to identify opportunities for improvement.

4.1.1 RFP Review Activities

In conjunction with the contractual review above, SysTest Labs reviewed the Request for Proposal (RFP) released by the County. The team completed the following activities:

1. Reviewed requirements/specifications outlined within the RFP
2. Facilitated stakeholder interview with the appropriate County personnel to review/confirm the business objectives for the absentee system

3. Completed a requirements traceability matrix for the absentee system that will classify each RFP requirements as “satisfied” or “not achieved” by the vendor
4. Assessed the alignment of the targeted County objectives and the documented requirements/specifications within the RFP
5. Outlined recommendations for requirement/specification clarifications that are more closely aligned with targeted County objectives
6. Reviewed Requirement/Clarification recommendations and Requirement Traceability Matrix findings with CERP
7. Outlined an implementation plan for the vendor to address “not achieved” requirements

4.1.2 Vendor Contract Performance

SysTest Labs evaluated the performance of Diebold and the printing vendor following the analysis of the RFP and the contracts. In addition to the tasks mentioned above, SysTest Labs completed the following activities and reviews:

1. Interviewed the County’s Project Manager staff and appropriate team members to evaluate the critical components of the project
 - a. RFP Project Timeline (Vendor’s Compliance)
 - b. Project Timeline Revisions (Causes of timeline changes)
 - c. Inventory of Project Deliverables
 - d. Deviations from the RFP and corresponding documentation (i.e. Change Request Forms, Project Plan Documents)
 - e. Quality Management Process
 - f. Issue/Risk Management Process
 - g. Capability Transfer Programs (Training, Knowledge Transfer, Support)
 - h. Testing Strategies/Processes
 - i. Project Deliverable Review/Approval Process
 - j. Capability Deployment Process (transitioning from deliverable to production)
2. Review Project Deliverables
 - a. Reviewed system design deliverables for completeness and compliance with defined requirements and stated Board objectives
 - b. Reviewed process deliverables for compliance with defined requirements and stated County objectives

- c. Reviewed Training deliverables for completeness, usability, and consistency with process deliverables
- d. Reviewed Testing deliverables and evaluate level of consistency with the defined requirements and quality expectations of the County

5 System Testing and Simulations Methodology

5.1 Master Test Plan

SysTest Labs developed a Master Test Plan required to provide guidance and standards for the onsite election system testing activities. Seven separate tests were designed and executed with the goal to understand the anomalies that were observed by Cuyahoga County Board of Elections, MCR and Diebold staff in the days leading up to the May 2, 2006 primary elections. SysTest Labs was able to re-create a number of the scenarios during its independent testing including the counting of Primary Election ballots that were clearly blank. Also, different vote counts were obtained during the testing in both precinct and central count modes using exactly the same ballot pages.

5.2 Access to Election Systems and Primary Ballots

1. SysTest Labs had access to the following items as test inputs:
 - a. Sample blank ballots pulled randomly from the supply of blank ballots provided by the Ballot Printer, MCR.
 - b. Original 20 Test Decks (containing 25 voted ballots each) that were used for the County's official Logic and Accuracy Test (L&A Test) on April 30, 2006 and May 1, 2006.
 - c. Sample test ballots that were hand voted by The SysTest Labs team.
2. SysTest Labs had access to all 20 AccuVote optical scan devices planned for use as the absentee ballot voting machines.
3. SysTest Labs had access to a fully configured absentee ballot configuration that includes the AccuVote optical scanners (configurations with 3 precinct count and 16 central count AccuVote machines), the Digiport servers (2), the network switch, and the Central Count Server (GEMS).
4. The three (3) machines that were converted back to Precinct Count configurations by Diebold Technicians on the morning of May 2, 2006 remained in that configuration prior to re-conversion to Central Count devices. Onsite Diebold personnel accomplished this conversion activity.

5.3 Inspection Methods

SysTest Labs inspected a number of the Cuyahoga County ballots that were prepared for the Optical Scan units for the purpose of counting absentee ballots. The primary inspection methods involved the use of two (2) tools:

5.3.1 Printer's Ruler

The printer's ruler provides several ways to measure document font, line and spacing sizes including inches, points and agate line.

5.3.2 Diebold Election Systems – Template BT014

Diebold provided a standard Mylar (clear plastic) template that allow precise measurement of optical scan ballot generated from the GEMS system. This includes cut tolerance marks, timing marks, score locations and valid voting oval positions.

5.4 System Tests and Simulations

SysTest Labs' activities under our system Testing and Simulations thread assessed the following areas of need as identified by the CERP:

1. Absentee system testing by County personnel for readers and ballots.
2. Simulating the Primary Election with live ballots to establish the repeatability of the failures encountered during the Primary Election.
3. System testing with a mixture of mocked-up ballots to determine if the failure was the result of the EMS Print Files, actual paper ballots, reader failure or calibration of machines by County staff and/or Diebold staff.

SysTest Labs conducted a series of simulated elections using the AccuVote Optical Scanning devices in addition to functional system testing of the scanner devices. For the system test effort, SysTest Labs planned a series of tests so that expected results could be determined prior to test execution. We used each scanner approved for use in the May 2, 2006 Primary and stepped through the set-up and configuration procedures for each. Following Diebold's documented processes, the team ran the diagnostics tests that are an integral part of the installation and power up.

In order to provide effective tests that would uncover issues that led to the problems encountered during the Primary Election, SysTest Labs needed to work with County officials authorized to use the Diebold Election Management System (EMS), GEMS, used to create the contests, ballot layouts and ballot print files. Following Cuyahoga County processes for creating the Primary Election, SysTest Labs requested that the county officials recreate a limited number of precinct ballot memory cards and associated ballot print files.

Once fully prepared, SysTest Labs ran all functional system tests, including but not limited to processing the following ballot types:

1. ballots created for the functional system test election,
2. blank ballots,
3. invalid ballots, e.g., over votes,

4. under voted ballots,
5. blank paper,
6. ballots that have extraneous marks,
7. ballots that were created not using the Diebold EMS, i.e., a counterfeit ballot.

Once the test was completed, results were analyzed by SysTest Labs and compiled for presentation purposes in this Final Report.

5.4.1 Tests

The eight (8) tests that formed the primary testing and simulation activities were:

5.4.1.1 Test One

Test 1 provided a range of results across the 3 AccuVote-OS optical scan devices over a set of up to 35 blank ballots. The purpose of this test is to observe whether or not ALL blank ballots can be successfully read by each of these Precinct Count versions of the AccuVote-OS optical scan device.

5.4.1.2 Test Two

Test 2 provided a range of results across the 3 AccuVote-OS optical scan devices using the ballots that were successfully read during Test 1. The purpose of this test is to observe whether or not ballots that were successfully read by each of these Precinct Count versions of the AccuVote-OS optical scan device accurately count the votes.

5.4.1.3 Test Three

Test 3 consisted of custom voted ballots, ballots created by SysTest Labs, that are voted on the Precinct Count version of the AccuVote-OS optical scan device. This test will employ a Test Deck that is made up of valid blank ballots, ballots voted in a valid manner (with and without under votes), and ballots voted in an invalid manner (check marks, extraneous marks, overvotes).

5.4.1.4 Test Four

Test 4 consisted of voted ballots created by MCR, that are voted on the Precinct Count versions of the AccuVote-OS optical scan device. This test employed a Test Deck that was made up of valid blank ballots, and ballots voted in a valid manner (with and without under votes). This was the Test Deck for Brookpark precincts that were used for late stage Logic and Accuracy Tests.

5.4.1.5 Test Five

Test 5 duplicated official L&A Test required by the County. Originally, the County intended to use 22 Test Decks with 6 ballots per deck. This test employed a Test

Deck with 36 validly voted ballots pages. This test included 16 optical scan devices networked into the Central Count server.

5.4.1.6 Test Six

Test 6 was another L&A Test using ballots “voted” by SysTest Labs’ staff. This test employed a Test Deck that was made up of valid blank ballots, invalid blank ballots (created by printing the .pdf on a personal printer), ballots voted in a valid manner (with and without under votes), and ballots voted in an invalid manner (check marks, extraneous marks, over votes).

5.4.1.7 Test Seven.

Test 7 simulated an election. This test employed a Test Deck that consisted of 19 voted ballots which was returned by Cuyahoga County voters for the May 2nd primary election

5.4.1.8 Test Eight.

Test 8 simulated both the pre-L&A tests as well as the L&A tests using test decks for Brookpark precinct that were designed in the styles used by Lorain County and Montgomery County. The test decks consisted of blank ballots, ballot voted during the printing process using the MCR L&A algorithm, and ballots hand voted following SysTest Labs’ expected results.

6 Operational Assessment Methodology

Our activities under our Operational Assessment thread assessed the following areas of need as identified by CERP:

1. Accuracy of the printed ballots.
2. Timeliness of ballot preparation by County staff
3. Accuracy of ballot style for absentees.
4. Position of timing marks on absentee ballots
5. Election Day absentee ballot counting procedures

SysTest Labs assessed the County's operations to determine its preparedness for an election and to determine potential risks and issues with the current processes and procedures. SysTest Labs' Operational Assessment thread will assess the following areas, as identified by the CERP:

1. Ballot preparation procedures
 - a. Ballot style set-up
 - b. Ballot style accuracy verification
 - c. Ballot ordering from printer
 - d. Printed ballot accuracy verification
 - e. Printed ballot distribution
2. Absentee ballot procedures
 - a. Absentee ballot requests
 - b. Completed absentee ballot receipt and time stamping
 - c. Absentee ballot counting
3. Canvassing and direct recording procedures
 - a. Direct recording tabulation procedures
 - b. Storage and gathering of direct recording memory device procedures
 - c. Back-up mechanism/audit trail procedures
 - d. Other polling location procedures that affect vote collection
4. Voting equipment set-up procedures
 - a. Pre-election absentee system testing for readers
 - b. Pre-election direct recording voting machine procedures

The specific activities that completed in this area of work include:

- a) Collect/Gather Procedural Documentation

SysTest Labs gathered the County's existing documentation on election processes and procedures. Documentation included process maps, training materials, procedure manuals, etc. used for the May 2, 2006 Primary. SysTest Labs also conducted interviews with County staff and vendor representatives (Diebold and MCR) to verify and validate the County's documented procedures. Where documentation does not exist, interviews and other data gathering mechanisms may be used as a baseline.

b) Analysis and Comparison

SysTest Labs analyzed the County's existing documentation on the processes and procedures for accuracy, completeness, clarity, and timing. SysTest Labs looked for potential points of failure or areas where the process could encounter problems/errors. The processes/procedures were compared to election best practices.

7 Appendix A – Terminology

1. **Central Count Optical Scan Device** – a central count optical scan device refers to the AccuVote OS optical scanners that have been specifically configured with the firmware required for the device to function as a central count voting machine. The ballot definition for precincts is contained in the Central Count Server database and not on the AccuVote OS optical scanners. All votes are stored in the Central Count Server database.
2. **Central Count Server** – the Central Count Server is the GEMS server used to program AccuVote-OS memory cards, receive **uploaded** election results in Precinct Count mode, and dynamically control the acceptance and posting of ballots in Central Count mode.
3. **Digiport Server** – the Digiport server is a network device that allows multiple AccuVote OS optical scanners, in Central Count **configuration**, to be networked directly into the Central Count Server via a network switch (see AccuVote OS optical scanners).
4. **Election Totals Report** – In **Precinct** Count mode, the Totals Report lists all candidate totals for all races in the election. The Totals report may be issued:
 - a. Following the counting of test ballots in Pre-Election Mode
 - b. Following the counting of official ballots in Election Mode
 - c. In Post-Election Mode
5. **Firmware** – firmware is software that is permanently loaded on an EPROM computer chip. The only way the firmware can be altered is by replacing the EPROM chip.
6. **Invalid Votes** – invalid votes typically indicate a vote that has not met the voting requirement specified on the ballot **for** each contest. This does not include an under vote which is considered a valid vote. This does include an over vote or marks on the ballot that are outside of the ovals designed for the actual vote.
7. **Memory Card** – A storage card **used** in the AccuVote-OS ballot processing unit to store precinct information and to record ballot results.
8. **Overvote** – A contest on a ballot with more candidates selected than the allowable number of candidates that are allowed to be selected.
9. **Precinct Count Optical Scan Device** – a precinct count optical scan device refers to AccuVote OS optical scanners that have been specifically configured with the firmware required for the device to function as a precinct **count** voting machine. The ballot definition for the specific

precinct is contained in the 128KB memory card and all votes are stored on in memory on the AccuVote OS optical scanners.

10. **System Memory Test** – Test available in **Diagnostics** Mode, used to test the functionality of AccuVote-OS RAM memory.
11. **Test Ballots** – Function available in Pre-Election **Mode**, used to performed the Unvoted, Fully Voted, and Count Tests.
12. **Timing Marks** – Black boxes set at ¼” intervals **along** the outside edges of the length of the printed ballot. All voting ovals printed on the ballot must be aligned with timing marks and Diagnostic marks so as to allow the AccuVote-OS to recognize marked candidate voting ovals in the course of ballot counting.
13. **Valid Votes** – valid votes are those votes that **meet** the voting requirements specified on the ballot for each contest, e.g., “Vote For Not More Than One”.
14. **Undervote** – Condition in which race with less **candidates** than the number to vote for have been voted; only valid in races with number to vote for greater than 1.
15. **Undervoting** – Undervoting involves the selection of **less** candidates than the number to vote for in a race. Undervoting is only applicable to races with a number to vote for greater than 1.
16. **Vote Mark** – A mark on the ballot made in a voting **oval** corresponding to either a candidate or question response.

8 Appendix B – Master Test Plan

This section of the Final Report contains the text from the Master Test Plan, SysTest Labs Document Number SL-CUY-MTP-0-060206, Rev 0.5 dated July 10, 2006.

8.1 Introduction

8.1.1 Purpose

This Master System Test Plan (MSTP) documents the major planning and procedures that SysTest Labs' System Test team will utilize during the course of the Cuyahoga County Independent Assessment System Test. These steps are the basis for ensuring that all major milestones and activities planned are successfully accomplished.

8.1.2 System Test Overview

Cuyahoga County experienced problems in the May 2, 2006 Primary election following a conversion of the Diebold optical scan absentee ballot voting equipment from "precinct count" to "central count". Reported pre-election day problems include:

- Failures in the ability of the Diebold optical scan absentee ballot voting equipment to read and/or process test decks from officially approved ballots
- Insufficient time required for pre-election test activities for the specific election

The Cuyahoga County Board of County Commissions (CCBCC) and the Cuyahoga Election Review Panel (CERP) have requested that SysTest Labs provide the following system test and simulated election tasks:

- Review the printed ballots.
 - Accuracy of ballot style for absentees.
 - Position of timing marks on absentee ballots
 - Paper width and ballot positioning (skewed or straight)
- Systems testing with live ballots to determine if failure was the result of paper ballot, reader failure or calibration of the AccuVote OS devices.
- Conduct an absentee ballot processing simulated election.

8.1.3 Assumptions

In describing the System Test effort, SysTest Labs makes these assumptions:

1. SysTest Labs will have access to the following items as test inputs:
 - a) Sample blank ballots pulled randomly from the supply of blank ballots provided by the Ballot Printer, MCR.

- b) Original 20 Test Decks (containing 25 voted ballots each) that were used for the County's official Logic and Accuracy Test (L&A Test) on April 30, 2006 and May 1, 2006.
 - c) Sample test ballots that can be hand voted.
2. SysTest Labs will have access to all 20 AccuVote optical scan devices planned for use as the absentee ballot voting machines.
 3. SysTest Labs will have access to a fully configured absentee ballot configuration that includes the AccuVote optical scanners (configurations with 1, 10, and 15 AccuVote machines), the Digiport server, the network switch, and the Central Count Server.
 4. The three (3) machines that were converted back to Precinct Count configurations by Diebold Technicians on the morning of May 2, 2006 will remain in that configuration.

8.1.4 Reference Documents

1. *AccuVote-OS Hardware Guide*, Diebold Election Systems, Revision 6.0, February 17, 2005.
2. *AccuVote-OS Central Count 2.00 User's Guide*, Diebold Election Systems, Revision 4.0, September 17, 2004.
3. *AccuVote-OS Precinct Count 1.96 User's Guide*, Diebold Election Systems, Revision 4.0, February 17, 2005.
4. *GEMS 1.18 User's Guide*, Diebold Election Systems, Revision 12.0, April 21, 2005
5. *AccuVote-OS Service Guide*, Diebold Election Systems, Revision 1.0, November 26, 2004

8.2 System Testing and Simulations

The system testing strategy involves these primary activity areas:

- Test 1 - Testing with 35 blank ballots on each of the 3 remaining Precinct Count configured AccuVote optical scan devices
- Test 2 - Replication of Test 1 for diagnostic purposes
- Test 3 - Testing with custom voted ballots, ballots voted by SysTest Labs on 3 Precinct Count versions of the AccuVote-OS optical scan devices
- Test 4 - Testing with 22 Test Decks with 6 voted ballots each on the 3 Precinct Count configured AccuVote optical scan devices
- Test 5 - Testing with custom developed Test Decks on the 17 Central Count configured AccuVote-OS optical scan devices

- Test 6 – Testing with 22 Test Decks with 6 voted ballots each on the 17 Central Count configured AccuVote optical scan devices
- Test 7 – Testing with a Test Deck with 19 voted ballots on the 17 Central Count configured AccuVote optical scan devices
- Test 8 – Testing the Cuyahoga County ballots (Brookpark precinct) designed using the ballot style for Lorain and Montgomery Counties.

8.2.1 Test 1

Test 1 will provide a range of results across the 3 AccuVote-OS optical scan devices over a set of up to 35 blank ballots. The purpose of this test is to observe whether or not ALL blank ballots can be successfully read by each of these Precinct Count versions of the AccuVote-OS optical scan device. The test will look to ensure that the feedback from the AccuVote-OS indicates “OKAY” for each blank ballot scanned.

The drawing shown in Figure 1 - Test 1, 2, 3 and 4 Hardware Configuration depicts the AccuVote-OS optical scan device in the Precinct Count standalone configuration. It will be this configuration that is used for Test 1.

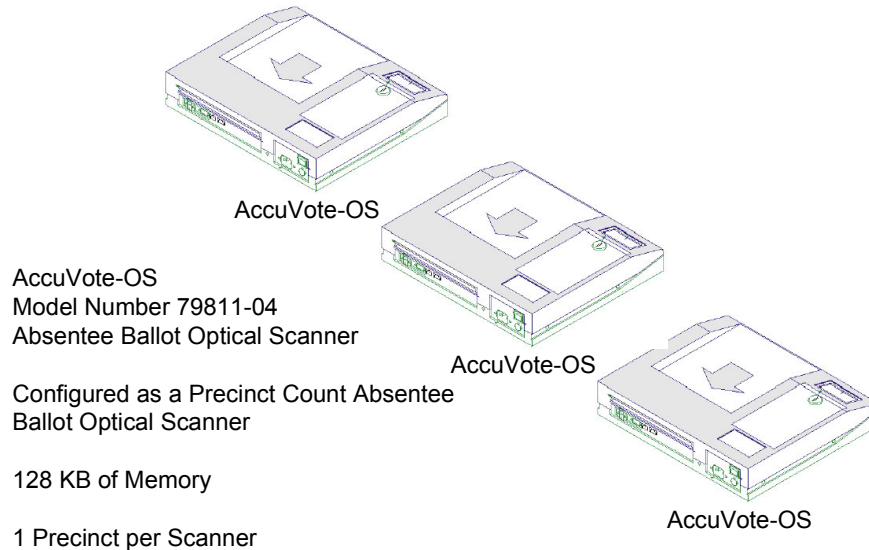
NOTE: the Model Number shown for the Diebold AccuVote-OS found on the back of each device is 79811-04.

8.2.2 Test 2

Test 2 was a duplicate of Test 1 and was used to support diagnostic activities. .

NOTE: the Model Number shown for the Diebold AccuVote-OS found on the back of each device is 79811-04.

Figure 1 - Test 1, 2, 3 and 4 Hardware Configuration



8.2.3 Test 3

Test 3 will consist of custom voted ballots, ballots created by SysTest Labs that are voted on the Precinct Count version of the AccuVote-OS optical scan device. This test will employ a Test Deck that is made up of valid blank ballots, ballots voted in a valid manner (with and without under votes), and ballots voted in an invalid manner (check marks, extraneous marks, overvotes).

The configuration for Test 3 is the same as that for Test 1 shown in Figure 1 - Test 1, 2, 3 and 4 Hardware Configuration.

8.2.4 Test 4

Test 4 will consist of voted ballots, ballots created by MCR that are voted on the Precinct Count versions of the AccuVote-OS optical scan device. This test will employ a Test Deck that is made up of valid blank ballots, and ballots voted in a valid manner (with and without under votes). The test will look to ensure that the AccuVote-OS can scan and tabulate results correctly with the correct ballot count.

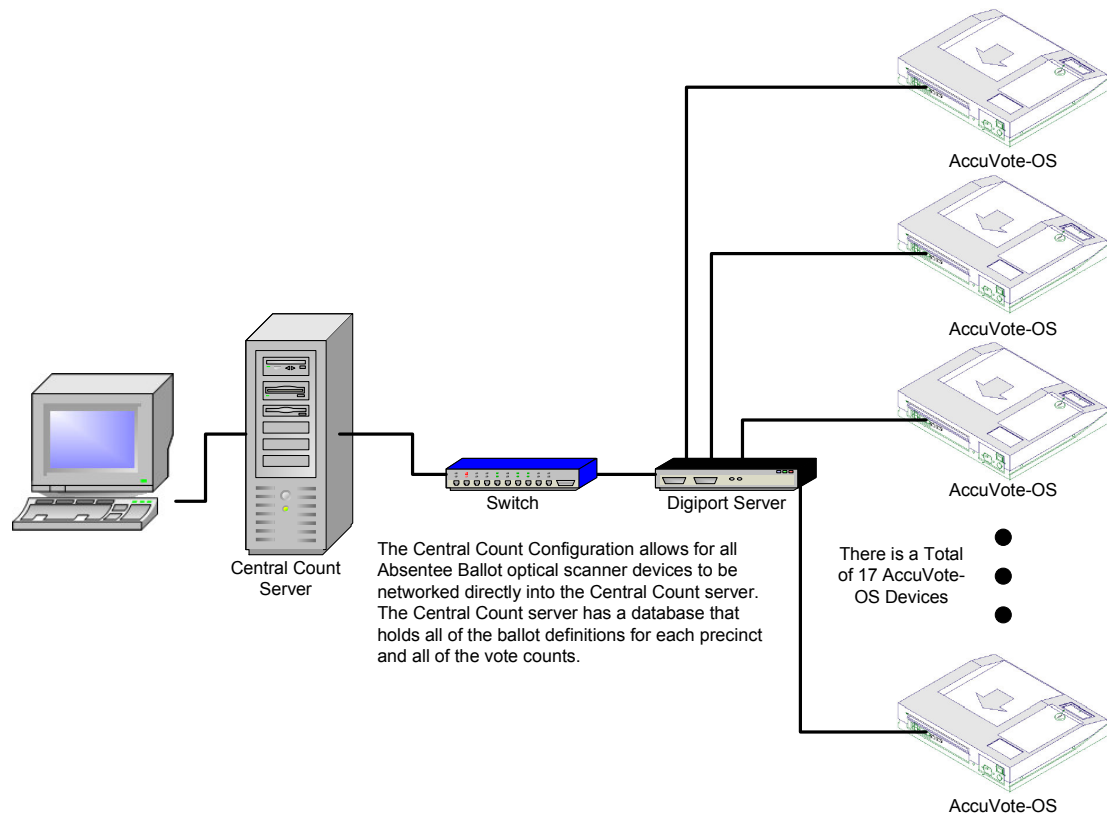
The configuration for Test 4 is the same as that for Test 1 shown in Figure 1 - Test 1, 2, 3 and 4 Hardware Configuration.

8.2.5 Test 5

Test 5 will duplicate official L&A Test required by the County. Originally, the County intended to use 22 Test Decks with 6 ballots per deck. This test will employ a Test Deck with up to 25 validly voted ballots for Brookpark precinct.

The configuration for Test 4, shown Figure 1 - Test 1, 2, 3 and 4 Hardware Configuration, will only include 17 optical scan devices networked into the Central Count server. Three of the original 20 Central Count configured optical scan devices were converted by Diebold Technicians to Precinct Count configuration for debug purposes, with permission from the County, the morning of May 2, 2006. One of the scan devices is used for uploading Memory Cards for Precinct Count.

Figure 2 - Test 5, 6 and 7 Hardware Configuration



8.2.6 Test 6

Test 6 will mimic the L&A Test used by the County but will make use of custom developed ballots created by SysTest Labs. This test will employ a Test Deck that is made up of valid blank ballots, invalid blank ballots (created by printing the .pdf on a personal printer), ballots voted in a valid manner (with and without under votes), and ballots voted in an invalid manner (check marks, extraneous marks, overvotes).

The configuration for Test 6 is the same as that for Test 5 shown in Figure 2.

8.2.7 Test 7

Test 7 will simulate an election. This test will employ a Test Deck that consists of 19 voted ballots which was returned by Cuyahoga County voters for the May 2nd primary election.

The configuration for Test 7 is the same as that for Test 5 shown in Figure 2.

8.2.8 Test 8

Test 8 will simulate both the pre-L&A tests as well as the L&A tests using test decks for Brookpark precinct that have been designed in the styles used by Lorain County and Montgomery County. The test decks will consist of blank ballots, ballots voted during the printing process using the MCR L&A algorithm, and ballots hand voted following SysTest Labs' expected results.

The configuration for Test 8 is the same as that for Test 1 shown in Figure 1 and Test 5 shown in Figure 2.

8.3 Test Items

The specific features to be tested in this set of system tests are limited to the ability of the AccuVote-OS optical scanners to perform the following functions:

- Read any and all ballots without errors
- Read and process properly voted ballots
- Reject invalid ballots
 - Overvotes
 - Extraneous marks
 - Invalid marking, e.g., check marks instead of ovals filled in
 - Ballots that fall outside of the cut tolerances, i.e., the ballot paper's length and width must fall within a specific set of values and tolerances.
- The ability of the AccuVote-OS optical scanners to read ballots with valid votes, process these ballots, and transmit the results for each ballot to the Central Count server for counting and consolidation.
- Accuracy of the AccuVote-OS optical scanners in counting ballots with valid votes.
- The ability of the Central Count Server to process and accurately count the votes obtained from the AccuVote-OS optical scanners.

8.4 Results Matrix

The results matrix for this effort consists of a series of potential resulting conditions from Tests 2, Test 3, and Test 4. The results shown in the matrix correspond to the specific results from comparisons between the known vote

counts for the ballots voted and the vote counts obtained from the Central Count Server. In addition, there will be conditions where ballots that were scanned in Test 1 resulted in an “error” but will be used to cast votes in Tests 2 through 4. Based on the results obtained, SysTest Labs hope to narrow down the root cause of the discrepancies between the expected results and the Central Count Server results.

Table 1 - Result Matrix

Description	Problems with Ballot Printer	Problems with Ballot Style	Problems with Paper	Problems with Read Heads	Problems with Central Count Server
Central Count Tally does not Match the Precinct Count and Precinct Count Matched the Expected Count Precinct Count did NOT Have Intermittent Errors reading the Ballots in TEST Mode					X
Central Count Tally does Match the Precinct Count and Precinct Count Matched the Expected Count Precinct Count did NOT have Intermittent Errors reading the Ballots in TEST Mode	Should have been no problems with the absentee ballot System				
Central Count Tally does not Match the Precinct Count and Precinct Count did NOT Matched the Expected Count Precinct Count did NOT Have Intermittent Errors reading the Ballots in TEST Mode				X	
Central Count Tally does Match the Precinct Count and Precinct Count did NOT Matched the Expected Count Precinct Count did NOT Have Intermittent Errors reading the Ballots in TEST Mode				X	
Central Count Tally does not Match the Precinct Count and Precinct Count Matched the Expected Count Precinct Count did Have Intermittent Errors reading the Ballots in TEST Mode			X		X
Central Count Tally does Match the Precinct Count and Precinct Count Matched the Expected Count Precinct Count did have Intermittent			X		

Description	Problems with Ballot Printer	Problems with Ballot Style	Problems with Paper	Problems with Read Heads	Problems with Central Count Server
Errors reading the Ballots in TEST Mode					
Central Count Tally does Match the Precinct Count and Precinct Count did NOT Matched the Expected Count Precinct Count did have Intermittent Errors reading the Ballots in TEST Mode			X	X	
Precinct Count identifies errors in blank ballots in "Test" Mode using Cuyahoga County ballot style Central Count tally results in inconsistent results with voted ballots using the Cuyahoga County ballot style Precinct Count identifies NO errors in blank ballots in "Test" Mode using Lorain and Montgomery County ballot styles Central Count tally results in consistent results with voted ballots using Lorain and Montgomery County ballot styles		X			
Precinct Count identifies errors in blank ballots in "Test" Mode using Cuyahoga County ballot style Central Count tally results in inconsistent results with voted ballots using the Cuyahoga County ballot style Precinct Count identifies errors in blank ballots in "Test" Mode using Lorain and Montgomery County ballot styles Central Count tally results in inconsistent results with voted ballots using Lorain and Montgomery County ballot styles	X				

8.5 Issue Management Process

Issue management spans all periods of the system test effort. For issue management process, the team will use the IssueTracker™ tracking tool. IssueTracker is a tool designed to assist in establishing a systematic method for documenting and tracking issues identified during the course of the effort.

8.6 System Test Final Report

The Final Report will be provided to the Cuyahoga Election Review Panel by SysTest Labs no later than Monday, July 10, 2006, 11am EST. This report will document the overall results for each of the system test efforts:

9 Appendix C – Traceability Matrix

9.1 Diebold Secretary of State RFP

Page # Attachment No. 3	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
17	All equipment and software must be certified by the State of Ohio. A copy of the certification issued by the State must be included in the Executive Summary. This is a mandatory requirement.	X	X
17	Offerors must also provide a statement that their proposed system does not require an interface with any Voter Registration system. This is also a mandatory requirement.	X	X
17	All hardware and software components of the proposed system, including provisions for absentee voting and voters with disabilities, must comply with the FEC Voting System Standards. All hardware shall have achieved compliance at the time that the proposal is submitted. Software and firmware shall have been submitted to the appropriate Independent Testing Agency (ITA) at the time the proposal is submitted, as evidenced by a letter from the ITA indicating receipt, and testing must be completed. The proposal must contain a copy of a letter to each ITA authorizing the ITA to release to the State any records or test results related to the proposed voting system.	X	Exception - documentation requested but not provided by SOS

Page #	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
Attachment No. 3			
	<p>Independent Testing Agency (ITA) All equipment and software proposed must be qualified by an ITA or currently pending ITA qualification provided the system has successfully completed the source code review portion of the testing. The ITA certification must be demonstrated with a copy of the qualification certificate issued by NASED approved ITA, or documentation from a NASED approved ITA that the system is pending qualification and that the source code review portion of the testing is complete and satisfactory, must be included in the Executive Summary, along with signed authorization directing the ITA that performed or is currently performing the qualification testing to:</p>	X	Exception - documentation requested but not provided by SOS
18	<p>Both DRE, precinct count optical scan, and ABS systems should:</p> <ul style="list-style-type: none"> o Produce a paper audit trail. To guard against fraud, systems shall not produce individual paper records that voters could remove from the polling place; o Accurately report all votes cast; o Control logic and data processing methods to detect errors and provide correction method; o Provide for the storage and tabulation of write-in votes; o Accommodate multi-member districts whereby multiple votes are cast for more than one post in the same election; o Permit diagnostic testing of all the major components within each unit; 	X	X Exception - see report X X X X

Page # Attachment No. 3	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
	<ul style="list-style-type: none"> o Provide printout results containing candidates and/or issues in an alphanumeric format next to the vote totals; o Provide logic and accuracy tests in the memory of the main processor and the programmable memory device used on Election Day, including zero printouts before each election and a precinct tally printout at the close of each election. o Permit recounts and contested elections to be conducted pursuant to the requirements of Title 35 of the Ohio Revised Code; and o In the event of the failure of a unit, retain a record of all votes cast prior to the failure. 		<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>
18	<p>Audit and Security</p> <p>The following requirements pertain to DRE, precinct count optical scan, and ABS systems unless otherwise noted:</p> <ul style="list-style-type: none"> o Provide a paper audit trail as referenced under Accuracy above; o Provide that each voter's ballot is secret and the voter cannot be identified by image, code or other methods; o Provide for summary reports of votes cast on each voting device by extracting information from a memory device or a data storage device; o Provide printed records regarding the opening and closing of the polls and include the following: <ul style="list-style-type: none"> <input type="checkbox"/> Identification of election, including opening and closing date and times; <input type="checkbox"/> Identification of each unit; <input type="checkbox"/> Identification of ballot format; <input type="checkbox"/> Identification of candidate and/or issue, verifying zero start; <input type="checkbox"/> Identification of all ballot fields and all special voting options; 	X	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>

Page # Attachment No. 3	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
	<ul style="list-style-type: none"> <input type="checkbox"/> Summary report of votes cast for each device, or ability to extract same; <input type="checkbox"/> Prevent printing of summary reports before the sequence of events required for closing of the polls are completed; <input type="checkbox"/> Poll opening reports should have all system audit information required; <input type="checkbox"/> No loss of data during generation of reports including results, images and inaccurate vote counts; <input type="checkbox"/> Integrity and security of data maintained according to time frame for federal, state and local elections; <input type="checkbox"/> Prevention of functions in an improper sequence; <input type="checkbox"/> Security provisions compatible with administrative set up and operational use; <input type="checkbox"/> Requirement for pre-election testing of logic and accuracy; <input type="checkbox"/> Requirement for logic and accuracy results to be stored in memory of main unit processor and Election Day device; <input type="checkbox"/> Programmable memory device to be sealed in unit with means of tamper detection; <input type="checkbox"/> Allow for extraction of data from memory devices to a central host; <input type="checkbox"/> Prevent modification of the voter's vote after the ballot is cast; <input type="checkbox"/> Protect the secrecy of the vote such that the vote may not be observed during the voter's selection of preferences, during the casting of the ballot, and as the voted ballot is transmitted for recording on a storage device; and <input type="checkbox"/> Prohibit voted ballots from being accessed by anyone until after the close of polls. 		X X X X X X X X X X X X X X X
20	The EMS shall provide a software capability for the creation of newly defined elections, for the retention of previously defined formats in that election, and for the modification of a previously defined ballot format. Such systems shall be designed so as to facilitate error-free definition of elections and their associated ballot layouts for DRE, precinct count optical scan, and ABS and	X	X

Page # Attachment No. 3	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
	comply with the ballot rotation requirements of R.C. 3505.03. The subsystem shall be capable of handling at least 500 potentially active voting positions, arranged to identify party affiliations in a primary election, offices and their associated labels and instructions, candidate names and their associated labels and instructions, and issues or measures and their associated text and instructions.		
21	<p>Absentee Voting</p> <ul style="list-style-type: none"> o The absentee voting system must be integrated with the entire Voting System provided by the Vendor. o The devices that produce or process the absentee ballots shall be programmed from the same database and election definition that is used to program the precinct voting devices. o The reporting and tallying system for the absentee ballot system shall be capable of tallying the absentee votes as a separate precinct or allocating the absentee votes back to the voter's precinct. o The absentee results shall be easily integrated with Election Day results (if applicable) in a timely manner. o The absentee voting system element must produce and record results from an optical scan ballot. 	X	X X X X X
21	<p>Provisional Voting</p> <p>Offerors shall discuss how their DRE, precinct count optical scan, and ABS voting equipment, as well as the EMS, can separate provisional ballots from non-provisional ballots cast at the precinct on</p>	X	Exception - Documentation does not support these features

Page #	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
Attachment No. 3			
	Election Day and discuss how results from provisional ballots can be easily downloaded into the final tally of votes if those provisional ballots are determined to be eligible for counting.		
22	<p>Election Reporting Requirements</p> <ul style="list-style-type: none"> o Provide a cumulative, canvass and precinct report of absentee voting, provisional ballot voting and Election Day voting as one total. o Provide for unofficial and official reports, in standard or custom format, including absentee and, Election Day and total vote. o Provide the ability to custom design an election report to include the following information in total or in part: <ul style="list-style-type: none"> • Name of election; • Political subdivision and party involved - separate reports should be available for each subdivision and party; • Date of election; • Type of report; • Total number of registered voters in each political subdivision and total number of registered voters in each race, and, where applicable, a breakdown by party; and • Total number of registered voters in each voting precinct, including a sub-listing when the precinct is split; and • Provide for the formatting of election results by capturing election data embedded in the database and producing specialized reports, i.e. a report of votes by multi-member district, legislative district or congressional district. 	X	 X X X

Page # Attachment No. 3	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
	<ul style="list-style-type: none"> o Provide, for election night reporting, a listing of precincts reporting and a listing of precincts not reporting. o Provide for the operator of the reporting system to change the appearance of the report by reformatting the data. o Provide for the removal of an already counted precinct and a re-counting of that same precinct in the event of errors in transmission. o Provide individualized sample ballot information for storage on a Web site and for reproduction and distribution. o Provide for the automatic transmission of election results through whatever medium chosen by the State, whether it be Internet, telephone lines, electronic data, etc. o Provide for the storage of election results in any version of software required, i.e., Access, Excel, Adobe, ASCII and HTML o Provide for election results to be produced in such a manner as to allow for easy copying for paper distribution upon request. 		<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>
24	<p>DRE, precinct count optical scan, and ABS Comfort Requirements</p> <p>The following requirements pertain to poll workers and Election Officials and staff for DRE, precinct count optical scan, and absentee ballot Systems:</p> <ul style="list-style-type: none"> o Devices should be transportable, without damage to internal circuitry; o Devices should withstand frequent loading and unloading, stacking, assembling, disassembling, reassembling, and heavy use, without damage to internal circuitry. o Devices should provide poll workers with a method to immediately detect if a voting unit is not operating properly; o The programmable memory device should be easy for poll workers to operate after the 	X	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>

Page #	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
Attachment No. 3			
	<p>closing of the polls; and</p> <ul style="list-style-type: none"> o Devices should be “tamper-proof” while in a storage configuration either in storage or the polling location. <p>The Contractor must supply the State of Ohio with installed and configured DRE, precinct count optical scan, ABS and EMS systems needed to respond with the State’s commitment to meet the voting system standards of the 2000 Help America Vote Act (HAVA). The Contractor must also provide training and overall knowledge transfer to State and local election officials. The Contractor will provide State and local Election Officials and Pollworkers with training materials for use in voter education programs.</p>		<p>X</p> <p>X</p>

Page #	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
Attachment No. 4			
25	<p>Installed, configured DRE, precinct count optical scan, ABS and EMS system</p> <p>To confirm successful installation and configuring of all DRE, precinct count optical scan, ABS and EMS systems, the Vendor will:</p> <ul style="list-style-type: none"> • Comply with all delivery and set-up dates detailed in Attachment 10; and 		Exception - WBS not provided

Page #	Description	Diebold RFP Response	Achieved (X) /Not Achieved (Commented)
Attachment No. 4	<ul style="list-style-type: none"> • Prepare, assure completion of and submit a checklist filled-in and signed by a duly authorized State representative attesting to the successful installation, configuration and testing of equipment at each location. <p>A detailed training program for each county</p> <p>4. Describe the particulars of your ABS system, including the procedures for creating and setting up ballots for DRE, precinct count optical scan, and ABS.</p> <p>. How are write-in votes handled on each Voting System (DRE, precinct count optical scan, and ABS)?</p> <p>7. How are provisional ballots handled (DRE, precinct count optical scan, and ABS)?</p> <p>8. Describe in detail the method for handling recounts on each Voting System. Electronic recount? Manual recount? Can each voter's ballot image be reproduced as is? If so, does voter anonymity remain in place?</p> <p>25. How should the Voting System be tested prior to absentee voting and Election Day to ensure the accuracy and readiness of each device?</p>		<p>Exception - delivery and testing documentation not available</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>Open</p> <p>X</p>

9.2 Diebold Training Requirements

RFP Training Requirement	Diebold Response	Achieved/Not Achieved
+ Achieved		
- Not Achieved		
• Programming of units	+	+
• Preparation of each individual unit	+	+
• Preparation of polling place to accept voting devices	+	+
• Electronic transmission of election results	+	+
• Tabulation of results	+	+
• Equipment and software used at the central counting station N/A	+	+
• Methods of ensuring the accuracy of precinct results	+	+
• Full understanding of the audit procedures	+	+
• Conduct of a recount	+	?
• Conduct of a contested election	+	?
• Records preservation	+	+
• Printing, designing and reformatting election reports	+	+
• Troubleshooting to solve temporary problems	+	+
• Safeguards to prevent and detect tampering or theft	+	+
• Hot points for system errors	-	+
• Training on the use of the Election Management System to design and layout ballots	+	+
A detailed training program for each county, which shall include:		
• Setting up and testing the voting equipment	+	+

RFP Training Requirement	Diebold Response	Achieved/Not Achieved
+ Achieved		
- Not Achieved		
• Suggestions for precinct set-up	+	+
• Operation of the voting device from start to finish	+	+
• Processing of voters, to the absentee voter, to the regular voter, to the provisional voter	+	+
• Troubleshooting methods to quickly identify and resolve any problems	+	+
• The opening and closing of polling locations on Election Day	+	+
• Proper operation and security for modem transmission of election results (if applicable)	+	+
• Printing of zero counts before the polls open	+	+
• Assisting voters who require help while in the voting process	+	+
• Immediate determination of device problems	-	+
• Using the battery back-up during electrical failure N/A	N/A	
• Taking a malfunctioning piece of equipment out of service	-	+
• Closing the polls and producing results in any of the methods available for that particular device	+	+
• How and when to place service calls	-	+
• Poll worker training provided by the vendor, to the county, at the direction of the county	+	+
• Training materials for use by election personnel when conducting educational outreach programs	+	+

RFP Training Requirement	Diebold Response	Achieved/Not Achieved
+ Achieved		
- Not Achieved		
Assistance with pre-election training of poll workers shall be performed prior to the primary, special and general elections in the first even-year federal statewide election of use	+	+
The vendor will provide a poll-worker training program on videotape to the SOS and each county board of elections. This video program will assist the SOS and local election officials in preparing poll workers to work the polls and properly operate the voting equipment. The State anticipates that this videotape should be 15-20 minutes in duration and will likely include a brief message from the Secretary of State, an overview of the State's response to the Help America Vote Act, and a demonstration of the features and functions of the new voting system. The State expects the vendor to assume responsibility for producing this instructional video program and arranging to make at least one copy for each precinct	-	+
Voter education programs will be conducted by the state and the counties. However, the vendor will be expected to provide basic voter education material to support state and county efforts	+	+
The vendor is also expected to partner with the State in	+	+

RFP Training Requirement	Diebold Response	Achieved/Not Achieved
+ Achieved		
- Not Achieved		
using the Secretary of State's Web presence as a communication and instructional medium for the new voting system. To this end, the vendor will actively participate in creating of informative communiqués of public interest during the project. The vendor will also develop an on-line demonstration and simulation of the new voting equipment as an additional educational tool		

9.3 Deliverables

Diebold Contract Deliverables		
Contract Section	Description	Status
2.a	Work Breakdown Structure (WBS) and Deployment Schedule (Deliverable 1)	Received
2.c	Validation of State's requirements (Deliverable 3)	Not received
2.d	Installed and configured DRE, PCOS, ABS and EMS system (Deliverable 4)	Not received
2.e	Documentation (Deliverable 5) Not received: 2.e.iii ID of version releases	Partial

Diebold Contract Deliverables		
Contract Section	Description	Status
	2.e.iv ID of procedures	
2.g	Training (Deliverable 7) Missing recount and contested election procdures	Partial
2.i	Election Administration Support (Deliverable 9)	Not received

9.4 Printing RFP

RFP Section	RFP Requirement	Achieved (X) /Not Achieved (Commented)
1	Awarded bidder shall be required to print all of the ballot pages for the May 2, 2006 election.	X
2	Printing shall be for the purposes of conducting the May 2, 2006 elections	X
3	CCBOE will provide a file from past elections for the vendor to provide 20 proofs of precinct OS ballots and 20 proofs of absentee ballots	Documentation not available
4	All ballots shall have clean perforations for the ballot tabulations in OS readers	X

RFP Section	RFP Requirement	Achieved (X) /Not Achieved (Commented)
5	Paper stock shall be 8.5 x 17 " 90# index stock two sided paper. Any open boxes become the property of CCBOE	X
6	No changes/additions/deletions to any of the ballots shall be made w/o prior approval of the BOE	X
7	Final inspection of the printing equipment and supplies . No ballots to be printed until final approval granted by BOE	Documentation not available
8	Description & quantity of items needed:	
I	Precinct OS Ballots	
8.i.1	8.5 x 17" 2-sided 90# stock	X
8.i.2	2 perforated stubs at ballot top, consecutively numbered with municipality, ward and precinct that leave a smooth clean cut when removed	X
8.i.3	Delivery on or before 4/15/06	Exception - due to County delays
8.i.4	Quantity - 150,000 for 1,434 precincts. Sample ballots 2 sets of approved ballots/precinct of each style in that precinct marked sample	X
8.i.5	Ballots should be clear shrink wrapped in packs of 50 or less	X
8.i.6	Sample election data enclosed	X

RFP Section	RFP Requirement	Achieved (X) /Not Achieved (Commented)
8.ii	absentee ballots on Demand	
8.ii.1	8.5x 17", 2 sided, 90# index stock	X
8.ii.2	2 perforated stubs at ballot top labeled A & B, consecutively numbered with municipality, ward and precinct that leave a smooth clean cut when removed	X
8.ii.3	The absentee ballots shall be folded between timing marks with the municipality, ward & precinct, voter name, mailing address, voter ID, bar code and ballot style visible on the B stub when folded and thru the envelope window	X
8.ii.4	Delivery on or before March 28, 2006 and then on a daily basis	X
8.ii.5	Quantity +/- 50,000 ballots at two sheets per ballot equaling an estimated 100,000. This quantity spread over a 35 day period. The ballot pages will have to be inserted into pre-stuffed envelopes (two envelopes) that will be provided by the CCBOE. Sample ballots: one set of approved ballots of each style in that precinct. Three or less ballot pages per voter	X
8.ii.6	The vendor will also be responsible for stuffing an instructional pamphlet into the pre-stuffed envelopes with the ballot pages. The pamphlet will be provide by CCBOE.	X
8.11.7	Sample data enclosed	

RFP Section	RFP Requirement	Achieved (X) /Not Achieved (Commented)
9	Vendor Responsibilities	
9.A	The vendor is responsible for meeting all the attached Diebold Election System Optical Ballot Specifications	X
9.B	One sample ballot of every precinct including absentee precinct shall be submitted to the CCBOE for testing and approval prior to the printing of the order	X
9.C	The vendor must provide a voted test deck after the printed delivery deadline	X
9.D	The vendor shall submit a sample of every fifth (sic) (50) ballot printed	Revised - BOE 4/26/06
9.E	Absentee OS Ballots shall be delivered on a daily basis. The CCBOE will provide the selected vendor with a data file of names, address and ballot style daily at a time agreed upon by the vendor and the CCBOE. The selected vendor will deliver an absentee ballot on demand from the adat (sic) file at a time agreed upon by the vendor and the CCBOE	X

10 Appendix D – Operational Assessment Documentation

The following electronic files in Excel format are incorporated in this report by reference.

Operational Assessment Questionnaire File Name
Cuyahoga County 1a Voting Systems - Machine Operations and Maintenance.xls
Cuyahoga County 1b Voting Systems - Machine Preparation and Delivery TSX.xls
Cuyahoga County 1c Voting Systems - Elect. Voting System Prep and Delivery.xls
Cuyahoga County 1d Central Count-Machine Storage.xls
Cuyahoga County 1e Voting Systems-Machine Storage.xls
Cuyahoga County 2a Absentee Application and Distribution.xls
Cuyahoga County 2b Absentee Receipt Processing and Reporting.xls
Cuyahoga County 3 Accessibility – ADA.xls
Cuyahoga County 4a Election Management.xls
Cuyahoga County 4b Election Workers.xls
Cuyahoga County 5a Election Worker Training.xls
Cuyahoga County 5b Training and Education - Voter Outreach.xls
Cuyahoga County 6a Ballot Preparation and Review.xls
Cuyahoga County 6b Electronic Ballot Review.xls

11 Appendix E – System Test Results

The following electronic files in Excel format are incorporated in this report by reference.

Test Run	Result File Name
1	Test 1 AccuVote-OS.xls
2	Test 2 AccuVote-OS.xls
3	Test 3 AccuVote-OS CustomVote.xls
4	Test 4 AccuVote-OS BRPK.xls
5	Test 5 Central Count BRPK.xls
6	Test 6 Central Count CustomVote.xls
7	Test 7 Central Count LiveBallots.xls
8	Test 8 Lorain-Montgomery Ballot Styles.xls

12 Appendix F – BOE Documentation of Main Activities to Conduct an Election

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
	Note: Red Font indicates either not received or out of date documentation			
1	Voter Registration <i>DIMS procedures</i> Scanning Operations Data Entry Procedures Phone Procedures Additonal List of Electors Procedures for Cancellation of Electors Procedure for Provisional Data Entry Procedures for Petition Certification Creating and delivering Poll Books	Y Y Y Y Y Y Y Y	 X X X X X X X X	 X
2	Maintenance of Voter records Updates reflecting change in address, change in name, change in party affiliation Marking records for absentee/military absentee/alternative ballots	Y Y Y	 X X X	
3	Changes to precinct/district boundaries New districts are added Boundaries change after census to reflect number requirements set by statute Updates to street locator system	 Y Y Y	 X X X	
4	Recruitment and/or retirement of Election Workers Working with Wards to secure election workers Identifying those individuals who are no longer capable of serving	 Y Y	 X X	
5	Securing and/or moving polling locations <i>Creating long term commitments</i> Assessing and modifying to meet ADA requirements	 N Y	 X	
6	Updates on election related legislation			

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
	Instituting changes as they become law Educating voters, election workers and staff on changes	N Y	X	
7	Voter education and outreach Registration drives Presence at appropriate political activities Working with schools to encourage voter participation Kids Voting Programs Press releases to newspapers Election dates and deadlines Notices required by law	Y Y Y Y Y Y Y	X X X X X X X	
8	Printing materials and supplies inventory Awareness of timelines Securing reputable and capable printers Maintaining stock of voter registration forms, absentee/alternative ballot applications	Y Y	X X	
9	Campaign reporting Notices to candidates and political parties Monitoring contribution reports Questions by media – public access to records	Y Y Y	X X X	
10	Election year calendar Special elections Recall elections Special district elections Town/Municipal elections Communications with interested parties Notices required by law	Y Y Y Y Y Y	X X X X X X	

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
	Calendar for participating entities	Y	X	
	Odd year elections	Y	X	
	Even year elections	Y	X	
	Primary elections	Y	X	
	Precinct caucus – party assemblies	Y	X	
	General elections	Y	X	
11	Petition approval and verification			
	Timelines	Y	X	
	Requirements	Y	X	
	Petition checking	Y	X	
12	Getting Ready – Specific timeline for election at hand			
	Statutory deadlines for election activities	Y		X
	Secure bids for printing	N		
	Order absentee envelopes/labels/supplies/provisional ballot envelopes/instructions	Y		X
	Order polling place supplies	Y		X
	Check voting systems to make sure they are functional, maintenance in completed, all systems are go	Y	X	
	Contact election workers-getting their commitments-making sure to have back-up workers available	Y	X	
	Contact Canvass Board members, confirm participation with parties	N		
	Schedule election worker training	Y	X	
	Contact polling locations-making sure agreements are in place, contacts are identified, access is guaranteed	Y	X	
	Coordinate with any entities participating in the election	N		
	Notices and deadlines are published	Y	X	

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
	Campaign/Candidate information is available for distribution	N		
	Signs for posting polling locations are ordered	Y	Y	
	Ballot layout is completed	N		
	Ballot styles and numbering is outlined	Y	X	
	Number of ballots to order is calculated	Y	X	
	Ballot order submitted to printer	Y	X	
	Upon return of the ballots from printer, review of styles, sequencing, accuracy	N		
	Prepare game plan for election night reporting	Y	X	
	Set up web site	N		
	Prepare to mail absentee ballots	Y		X
	Contact press to make sure they have an understanding of the process	Y	X	
	Required testing of voting systems is completed	Y		X
	Voting equipment is secured for election day	Y	X	
	Early voting preparations begin – polling locations set-up and staffed			
	Conduct election worker training	Y	X	
	Distribute voting equipment to polling locations	Y		X
	Distribute election day materials and ballots to appropriate sites	Y		X
13	Election Day Activities			
	Trouble shooting polling place problems	Y	X	
	Telephone inquiries	Y	X	
	Am I registered?	Y	X	
	Where do I vote?	Y	X	
	Did I request and absentee ballot?	Y	X	
	Where do I find out who to vote for?	Y	X	

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
14	Problem voters			
	Not registered	Y	X	
	Registered late	Y	X	
	Moved from another county	Y	X	
	Moved from another state	Y	X	
15	Press Inquiries	Y	X	
16	Election Night			
	Return of results	Y		X
	Electronic	N		
	Central Count	N		
	Return of supplies	Y		X
	Security	Y	X	
	Voted Ballots	Y		X
	Unused Ballots	Y		X
	Voter rolls/poll books	Y	X	
	Provisional Ballots	Y	X	
	Public reports			
	Press	Y	X	
Candidates	Y	X		
	Web-site	N		
17	Preparation for Canvass Board			
	Provisional Ballot Review	Y		
	Poll books scanned	Y	X	
	Security of documents	Y		X
	Log of activities	N		
	Identification of problems	Y		X

#	Documentation of Primary Activities to Conduct an Election	Received	Up to Date	Out of Date
	Recount potential	Y	X	
	Notices for recounts	Y	X	
18	Recounts			
	Scheduling			
	Attendance	Y	X	
	Procedures	Y	X	
	Notification	Y		X
19	Election Clean Up			
	Judges pay	Y	X	
	Pick up of supplies at polling locations	Y		X
	Update voter records	Y	X	
	Mailing to confirm updates	N		

Appendix N: Interim Report

The Panel's Interim Report, issued on June 14, 2006, follows.

To: The Board of Elections and the Board of County Commissioners of Cuyahoga County, Ohio

From: The Cuyahoga County Election Review Panel

Subject: Interim Report on Issues Surrounding the Conduct of the Primary Election Held in Cuyahoga County on May 2, 2006

Date: June 14, 2006

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Introduction

During the May 2, 2006 Primary Election, most Cuyahoga County voters (“electors”) were required, for the first time, to cast ballots for the candidates and issues of their choice electronically. Despite extensive planning and preparation at all levels by the Cuyahoga County Board of Elections for this momentous transition from punch cards to e-voting technologies, significant problems occurred at the polling places on Election Day as well as in tabulating the vote. Completion of the unofficial vote count was delayed for approximately a week.

In light of the range of unanticipated problems, before the unofficial election results were announced the Board of Elections had started moving toward the creation of an independent review. On May 17, 2006, the Board of Elections unanimously passed a formal resolution constituting and charging the three-member Cuyahoga Election Review Panel. The resolution charged us to conduct an independent investigation into the surrounding facts and circumstances that adversely affected the outcome of the 2006 primary in this County. One day later, expressing its own concerns, the Cuyahoga County Board of Commissioners adopted a similar resolution, endorsing this Panel’s investigation, pledging the necessary resources for the transaction of our work, and requesting full reports on the outcomes of this study.

The Panel moved quickly to identify areas of investigation, assemble a competent staff and to marshal necessary experts and other resources to conduct a thoughtful and thorough inquiry. As charged by the Board of Elections, we are to:

1. Identify the deficiencies in the Cuyahoga County elections performance occurring in the May 2, 2006 election, including problems: (a) with preparation for the election, (b) with the conduct of the election on May 2, and (c) following the closing of the polls, including tabulating the vote.
2. Ascertain the causes and contributing factors to each aspect of deficient performance, including the technological failures, and training and administrative issues.
3. Provide a set of recommendations for remedying the deficiencies and achieving the highest standards in election administrative performance.

We recognize that the overarching purpose is primarily constructive: identify promising resolutions of those issues before the beginning of November’s General Election cycle, which predominantly commences at the end of August 2006. We have dedicated ourselves to that mission.

Accountability is central to this investigation. We seek to provide via this post-mortem investigation, accountability: accountability for decisions made and systems adopted to

collect, count and safeguard our votes. Such accountability is needed to correct the problems that have been revealed and achieve the required improved performance.

Accountability is also required for the restoration of the public's confidence in its electoral system. In our interviews within the management and staff of the Board of Elections, as a preliminary matter we were impressed that most appeared competent, dedicated, and hardworking. They present as individuals who are committed to the production of open, fair, efficient and accurate elections for our community.

Additionally, Cuyahoga County conducted an initial survey of voter attitudes toward the new electronic voting process following the May 2, 2006 primary. The preliminary results of that survey suggest that, overall, a significant majority of those who voted experienced no problem with the new technology. Yet, by many measures, that election was dangerously flawed. We are thus left to answer the question: Why wasn't the election flawless?

Our plan for pursuing the answers to that question is contained in the pages of this Interim Report. The Panel's Final Report and Recommendations will be simultaneously delivered to the Board Members of the Cuyahoga Board of Elections and the County Commission on July 17, 2006.

Respectfully submitted,

Judge Ronald B. Adrine, Chair

Director Thomas J. Hayes

Professor S. Candice Hoke

Acknowledgements

We, the Cuyahoga Election Review Panel (CERP), would like to acknowledge the parties which made this project possible. We would like to thank the Cuyahoga County Board of Elections for prompting this initiative and the Cuyahoga County Commissioners for partnering in this project and supporting our charge. We would also like to thank Geoff Mearns, Dean of the Cleveland Marshall College of Law, and Jack Boyle, Vice President for Business Affairs and Finance, for their assistance in expediting the setup of our temporary offices and logistical needs. We would also like to acknowledge and thank President Michael Schwartz and the staff of Cleveland State University who have graciously supported our effort.

I. Work Plan & Methodology

The scope of this investigation covers the breadth of activities of the Cuyahoga County Board of Elections in preparing and implementing procedures for the May 2nd election, and the strategies that need to be undertaken to achieve excellence in election administrative performance.

In order to fulfill the charge, this investigation has commenced using the framework outlined in the CERP work plan (Appendix B). The broad areas of investigation called for by the work plan are:

- The election master plan and its execution;
- Procurements and procurement procedures affecting the conduct of the election, and relevant contractual relationships;
- Structure, coordination, and performance of critical Board of Elections units;
- Recruitment, training, deployment and support of poll workers (Booth officials and Election Day Technicians);
- Voter registration and provisional ballot systems and procedures;
- Equipment, supplies and ballot preparation and testing procedures, deployment, security and proper function;
- Election Day logistics, systems, procedures, and performance of personnel;
- Ballot counting systems and procedures including testing, security, and reconciliation;
- Absentee ballot systems and procedures including procurement, preparation, and testing.

The CERP has planned and begun to use a number of methods for investigating issues and developing recommendations to be disseminated in the final report of July 17, 2006.

Data is being gathered through:

- Interviews with Board of Elections personnel and walk-throughs of processes;
- Public hearings;
- Exit polls of voters;
- Telephone testimonies from voters and polling place personnel;

- Information provided by e-mail, online web forms, and other written submissions;
- Focus groups and surveys;
- Legal source materials;
- Documents provided by vendors, advocate groups, and the Board of Elections;
- Interviews with relevant vendor personnel; and
- Interviews with relevant government offices from the State and its Counties.

Primary analysis is through:

- Analysis of a range of relevant documents from Board of Elections administration and Election Day activities;
- Research into additional sources of corroboration for information reported by voters, poll workers, technicians, Board of Elections employees, and others;
- Reconciliation of actual systems and procedures, and received equipment and materials, with those called for by contracts, directives, and the governing law.

Recommendations are being developed through:

- Review of national “Best Practices”;
- The compilation of relevant recommendations given by the Board of Elections personnel, poll workers, advocacy organizations, and voters in interviews and testimony;
- Additional corrections which become apparent through analysis of expected, planned, and actual performance; and
- Review of the successes of other jurisdictions.

Through these and other appropriate methods, the CERP will continue to examine the issues that impeded the Board of Elections’ conduct of the May election. It will identify solutions to resolve as many issues as possible before the beginning of November’s General Election cycle, which commences at the end of August.

II. Staffing

The CERP hired a Project Manager to be the administrative head of the operation. Jointly with a Panel member, the Project Manager then interviewed dozens of recommended candidates and hired a staff of 16 individuals to conduct the investigation under the CERP’s direction. (Appendix D)

The Cuyahoga Election Review Panel staff is comprised of well-qualified individuals that are representative of Cuyahoga County. The Panel gave careful consideration to the criteria for selecting individuals to account for both the scope of the investigation as well as the timeframe. Staff members have backgrounds in law, public administration, operations management, software engineering, and urban affairs. These individuals demonstrate a combination of acumen and skill that is appropriate for this initiative.

Working in project teams, each team is assigned one of the areas of inquiry called for by the work plan (Appendix B, summarized above). Guided by Panel members, each team is actively investigating problems raised by Board of Election personnel, citizens of Cuyahoga County, and community organizations. The teams seek to identify the problems uncovered by their research, and to generate recommendations to address them which can be implemented for the next election.

III. Office Setup

With the dedicated assistance of multiple departments of the County (especially the County Administrator's Office) and of Cleveland State University, the CERP was able to set up its office and begin operations in a matter of days. The office design and layout serves to facilitate secure document analysis and storage, telephone interviews, research and efficient administration.

The CERP office, located at 1801 Euclid Ave., Cleveland, Ohio is a fully-functional office environment equipped with telephones, computers, Internet access, copying and document storage systems. Systems and procedures were established at once to ensure security and confidentiality; computer systems have been inspected and approved by a network security specialist. Systems and procedures are reviewed from time to time to ensure continuing security of sensitive materials.

IV. Public Outreach

The CERP has arranged forums and systems for voters, poll workers (Booth Officials and Election Day Technicians), and other citizens of Cuyahoga County to provide input about problems they experienced with the May 2nd election. Through public hearings, telephone calls, electronic submissions and faxes, information is being gathered and used by the CERP's project teams in their investigation.

1) Public Hearings

Public hearings were held to gather input from individuals and representatives of organizations wishing to testify about the conduct of the May 2006 primary. Congresswoman Stephanie Tubbs Jones, The Maxine Goodman Levin College of Urban Affairs Forum Program, and the Center for Election Integrity acted as partners of the CERP in holding these hearings.

Although Congresswoman Tubbs Jones intended to hold public hearings prior to the appointment of the Panel by the Board of Elections and the Cuyahoga County Board of Commissioners, the Congresswoman facilitated the scheduled hearings by explicitly stating that they served as forums for the CERP investigation. Panel members were present at most of these Hearings.

Sensitive to the concerns of local advocacy organizations, the CERP identified groups actively doing locally based election review and/or advocacy work at the time of the 2006 primary election. The Panel then held a hearing to gather input from these groups. The CERP invited these organizations to prepare presentations and submit reports in order for

it to understand their concerns. The Panel then incorporated, for consideration by its project teams, the relevant observations and research so obtained.

Finally, the Panel accepted an invitation by the Center for Election Integrity to refocus its planned June 9 election issues conference in order to assist the Panel's work. The Center offered to organize a series of conference panels, partnering with The Maxine Goodman Levin College of Urban Affairs Forum program. The June 9th conference, entitled "*Lessons Learned From Ohio's Primary: Making November a Success,*" produced additional valuable information, for example, presentations from election directors in Columbus and in Akron, which were heard alongside a presentation by Cuyahoga County Board of Elections Director Michael Vu. The Panel's final Public Hearing was scheduled to follow directly after the Conference. This arrangement made it possible for the Panel to hear further testimony in a community forum setting and at low cost to the taxpayers.

The CERP and staff heard 104 testimonies in these hearings, and a court reporter recorded the proceedings of each for use by the CERP. Below is a breakdown of the various hearings, their dates, and the number of testimonies recorded:

Stephanie Tubbs Jones Public Hearings:

May 22, 2006	Beachwood:	21 testified
May 30, 2006	Euclid:	21 testified
May 31, 2006	Cleveland:	15 testified
June 01, 2006	Bedford:	15 testified
June 02, 2006	E. Cleveland:	15 testified

Advocacy Group Public Hearing

May 31, 2006	5 testified
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Public Hearing following the Election Conference

June 09, 2006	12 testified
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2) Telephone Calls

The CERP office solicits testimony via telephone to its office in order to hear the concerns of members of the community not present at hearings. At the time of this report, the CERP has collected data from eighteen (18) individuals by telephone. The contact number is 216-802-3020.

3) Electronic Submissions

The CERP maintains the www.cuyahogavoting.org Web site as a conduit for public input and to disseminate public information about its mission. Through online forms and e-mail, to date, the CERP has received testimony from 59 individuals electronically.

4) Faxes

The CERP maintains a fax line as an additional mechanism to gather input. The contact number is 216-802-3344.

V. Investigation

The CERP has delineated a method for investigating the events during and leading up to the May 2nd election including interviews with involved parties, Board of Elections on-site studies, document analysis and legal research.

1) Interviews

The Cuyahoga Election Review Panel has interviewed the vast majority of permanent staff and managers at the Board of Elections. It has also conducted interviews with poll workers and interested voters to fully understand the problems of the May 2nd election. At the time of this report, fifty-five (55) Board of Elections line staff members have been interviewed, and twenty (20) Board of Elections administrators and managers have been interviewed.

In order to remain objective and preserve the validity of the findings, Panel members have avoided any conflict of interest in interviewing Board of Election management and staff. Care has been taken to ensure that no interviewee, at any time, directly reported to the CERP member conducting his or her interview.

2) On-site Study at the Board of Elections Offices

In order to understand the intricacies of the planning and implementation of the May 2nd election, the CERP and staff participated in Board of Elections “walk-throughs”. During each of the following, all Panel members attended and asked questions to fully develop an understanding of the internal processes:

May 30, 2006	Registration, Absentee Voting and Alphabetical Poll Book Prep processes (over 3 hours)
June 01, 2006	Candidate Petitions, Ballot Prep and Voting Device Prep processes (over 3 hours)
June 08, 2006	Election Day, Election Night and Ballot Count processes (over 4 hours)

3) Document Analysis

Document analysis is a primary means of investigating the issues and possible causes of problems experienced in the May 2nd election. Steps have been taken by the CERP and staff to insure that a consistent flow of pertinent information is available to the investigative project teams and Panel members. As of this writing, the CERP and staff have reviewed two hundred two (202) documents. A considerable number of additional documents have been received and not yet reviewed, and further document requests are awaiting fulfillment.

Creation of Document Analysis form

In order to track and quantify the issues raised in problem report forms and in testimony, the CERP enlisted the assistance of a legal professional with extensive experience in

election evaluation methods. The CERP commissioned a grid for analysis as a primary tool to be used in analyzing the problems reported by Board of Elections employees, poll workers and voters.

Document Intake Process Design

The need for security and tracking of the multiple sets of documents required for its investigation required the CERP to initiate an effective document intake process. Similar to a library system, the document management design delineates methods for recording incoming documents, phone calls, e-mails, faxes and electronic submissions received.

The CERP's document management system categorizes documents into areas of concern corresponding to the CERP project teams. This process outlines the steps which are taken to disseminate information to the appropriate project team, and tracks which documents are in whose hands at any given time.

4) Legal Research

A large portion of the CERP investigation is heavily rooted in the question of contractual promises verses delivered outcomes. Some of the areas of legal research conducted by the CERP and staff include:

- Regulation regarding the purchase of voting machines
- BOE reporting of election results
- Federal and State voting machine technical specifications
- Tying agreements related to ancillary equipment specified by Diebold
- Ballot creation
- Voter Verified Paper Audit Trail
- Voting machine per resident requirement
- Recount standards
- Poll worker eligibility and polling place staffing
- Warranty issues on equipment

VI. Future Investigative Direction

The CERP will continue to assess the problems and causes of the problems experienced in the May 2nd election. Fulfilling its charge, the Panel will prioritize constituent concerns and develop recommendations for measurable improvement in Board of Elections operations.

One of the planned activities of the CERP includes soliciting poll worker opinions through focus group discussions. These focus groups are intended to identify areas of greatest concern to poll workers and gather their specific recommendations on ways to do their jobs more effectively. The Panel will also investigate those precincts with previously-identified problems, as well as any other precincts where other challenges are discovered.

VII. Future Activity of the Cuyahoga Election Review Panel

The CERP Schedule of Activities between the time of this interim report and the release of the final report is as follows:

- June 19 Conference w/ staff, in re: preliminary findings and conclusions, direction of final investigative push
- June 30 Delivery of final investigative work product by staff to Panel for consideration
- July 7 Staff Draft of Final Report delivered to Panel
- July 7 - 9 Discussions and Modifications to Final Report by Panel
- July 10 Final Report Proofing
- July 11 Report Printed for Distribution
- July 12 Preview of Final Report's Findings and Recommendations
- July 17 Final Report Delivered to the Board of Elections and the Board of County Commissioners

VIII. Conclusion

The CERP has acted in earnest to fulfill the charge directed by the Board of Elections and Cuyahoga County Commissioners within the timeframe allotted. The progress to date is significant, and findings are being documented and substantiated through the investigation team.

As a part of the July 17th final report, the CERP will inform the Board of Elections and the Board of County Commissioners of reasonable measures that can be taken to achieve excellence in the County's election administration.

Appendix A.1 Policy Statement and Resolution of the Cuyahoga County Board of Elections

Cuyahoga County Board of Elections

Policy Statement

and

Formation of the Election Review Panel

Comprehensive Review of the Problems that Occurred in Preparing For and Conducting the May 2, 2006 Election in Cuyahoga County

The Cuyahoga Board of Elections recognizes that a variety of problems occurred on Election Day, May 2nd, and others arose during its activities preparing for this election. This primary election was the first in which two new electronic voting systems were used county-wide. It required the creation and deployment of a wide range of new administrative and training systems in a very short period of time. Effective completion of these tasks presented high hurdles, and despite its dedicated efforts, the Board did not clear the bar in some respects.

We sought to conduct an error-free election. We join the voters and candidates in saying that the technical and administrative performance levels of the May 2nd election are unacceptable and cannot be repeated. We can and will dramatically improve this Board's performance in conducting elections before the next federal election scheduled for November 7, 2006. The voters of this county deserve nothing less.

For these improvements to occur in less than the six months remaining before November, the Board must initiate a rigorous, independent, and comprehensive review that will identify both the causes and effective solutions to these difficulties. And it must be completed expeditiously in light of the election calendar. We must structure the inquiry in a manner that will incorporate relevant expertise, depth of insight, and sound judgment. It must be able to move quickly and surely to determine the problems and the needed resolutions. And it must be conducted with the utmost integrity and impartiality.

Obviously, this independent and impartial inquiry must be conducted by those who have no financial connection to Board Members, its employees, and contractors. It must not be politically biased in any manner. It must avoid a cumbersome structure that would make the logistics and pace of its work difficult to achieve. And the panelists must be available to start on this work immediately.

With these principles in mind, the Cuyahoga County Board of Elections has created the Cuyahoga Election Review Committee. We have directed all employees and contractors

of the Board to cooperate in every manner with the Review Committee's work. We request that all persons within County government, within its contractors' staffs, and members of the public at large who might have relevant information to be forthcoming with that information. We also charge the Review Committee to cooperate with the Secretary of State's investigation into the events under examination, and to obtain relevant information and evaluations from the County's technical contracting firm on an expedited basis.

We believe that this independent inquiry will generate the information that is essential for the Board to receive so that it can correct various problems that may impede citizens' rights to vote and the ability of the Board of Elections to tabulate that vote accurately.

Further details can be found in the statement below.

Name: **Cuyahoga Election Review Committee**

Composition: 3 members: Appointed to these posts are:

1. Judge Ronald B. Adrine
2. Director Thomas J. Hayes
3. Professor Candice Hoke

Agreeing to chair this inquiry is Judge Ronald B. Adrine.

Charge:

1. Identify the deficiencies in the Cuyahoga County elections performance occurring in the May 2, 2006 election, including problems with (a) preparation for the election, (b) the conduct of the election on May 2, and (c) those following the closing of the polls, including tabulating the vote.
2. Ascertain the causes and contributing factors to each aspect of deficient performance, including the technological failures, and training and administrative issues.
3. Provide a set of recommendations for remedying the deficiencies and achieving the highest standards in election administrative performance.

Timetable for Reports: A report is to be completed by July 17, 2006 with an interim report submitted to the Board by June 14, 2006.

RESOLUTION

WHEREAS, the Board of Elections recognizes the need to comprehensively understand the events leading up to and occurring in the May 2, 2006 Primary Election;

WHEREAS, the Board of Elections formed an independent panel known as the Cuyahoga Board of Elections Review Panel to review the May 2, 2006 Primary Election;

WHEREAS, the Board has requested Judge Ronald Adrine of the Cleveland Municipal Court chair said Panel, Candice Hoke, Law Professor of Cleveland Marshall College of Law and Director of the Center for Election Integrity at Cleveland State University, and Thomas Hayes, Director of the Ohio Lottery Commission and former Director of the Board of Elections serve on said Panel;

WHEREAS, the Board is requesting the review of all administrative duties and functions performed by the Board of Elections staff in preparing for and conducting the May 2, 2006 Primary Election;

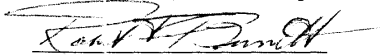
WHEREAS, the Board is requesting the review of poll worker recruitment and training issues relevant to improving polling place performance in future elections, and;

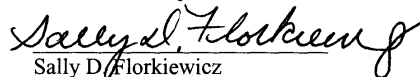
WHEREAS, the Board is requesting a forensic analysis into the optical scan ballots and devices and the cause of the manual count of the optical scan ballots, and;

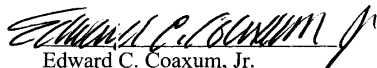
WHEREAS, the Board is seeking to achieve excellence in all aspects of its operation.

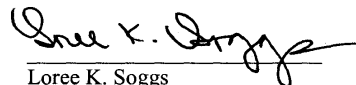
NOW, THEREFORE, BE IT RESOLVED BY THE CUYAHOGA COUNTY BOARD OF ELECTIONS:

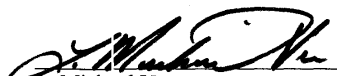
We hereby approve the attached Policy Statement and Formation of the Election Review Panel as indicating the charge and duties of the Cuyahoga Board of Elections Review Panel to review the May 2, 2006 Primary Election and report back to the Board by July 17, 2006 with suggested changes that will ensure proper administration, quality poll worker recruitment and training, accurate and reliable tabulation of optical scan ballots in future elections, and other improvements as the Panel determines important.


Robert T. Bennett
Chairman


Sally D. Florkiewicz
Board Member


Edward C. Coaxum, Jr.
Board Member


Loree K. Soggs
Board Member


L. Michael Vu
Director


Gwendolyn Dillingham
Deputy Director

Appendix A.2 Resolution of the Cuyahoga County Board of County Commissioners

Resolution passed May 18, 2006
will soon be available on the
Cuyahoga County Board of Commissioners
website at the following URL:

<http://cuyahogacounty.us/bocc/resolutions/resoyear.asp>

Appendix B. Work plan - May 18, 2006 Project Scope

Cuyahoga Election Review Panel (CERP) Task List

Review election master plan and evaluate execution of the plan.

Review all election related procurements and procedures used for those procurements.

Review the performance of critical CCBOE personnel assigned to the election process.

Investigate any contractual or other relationship between Dayton Legal Blank, ES&S and Diebold.

Review the Booth Officials Office including:

- Recruitment
- Training
- Deployment of booth officials and pool staff
- Attendance
- Feedback
- Analyze incident reports from booth officials, and election technicians and organizations
- Interview booth officials and election technicians to assess election
- Conduct telephone surveys of Booth officials and EDTs

Review of Registration System including:

- Purging procedures
- Registration challenge procedures for Election Day
- Provisional ballot procedures

Review the operations of the Warehouse including:

- Device preparation and loading ballot styles by voting location
- LNA/IV&V Testing at the Warehouse
- Device deployment
- Device security
- Supplies at polling location
- Voting location readiness and availability @ 6:30 am.
- Voting device failure rate and reasons for failure

Review the operations of Ballot Prep including:

- Design of ballot
- Creation of ballot styles
- Ballot rotation and proofing
- QC of optical scan ballots

Election Day procedures and performance including:

- Polling location setup
- Polling locations open 6:30 am to 7:30 pm
- Call center logs and resolutions to complaints
- Pink Sheet issues/Supervisor cards
- Performance of Election Day technicians
- Performance of Election Day inspectors
- Poll closing procedures

- Return of memory cards
- Return of devices
- Call Centers including scalability and responsiveness

Ballot Counting procedures and performance including:

- Testing of vote tabulation machines and readers
- L&A testing of readers and tabulation machines
- IV&V by the SOS of readers and tabulation machines
- Chain of custody of memory cards
- Reconciliation of Certificate # 1 by polling location
- Review all procedures used to conduct the official count

Review Administrative Structure and Personnel Issues including:

- administrative and reporting structures
- communication systems between top managers and the Board
- communication systems between department managers and top managers
- criteria for hiring and promotion of staff
- overtime & compensation issues for permanent staff temporary staff recruitment, deployment, supervision, and evaluation
- systems for employee reports of legal infractions (“internal whistleblowing”)
- methods for follow-up on voter & advocacy organization concerns/recommendations
- communication systems between candidates and BOE on election problems/results

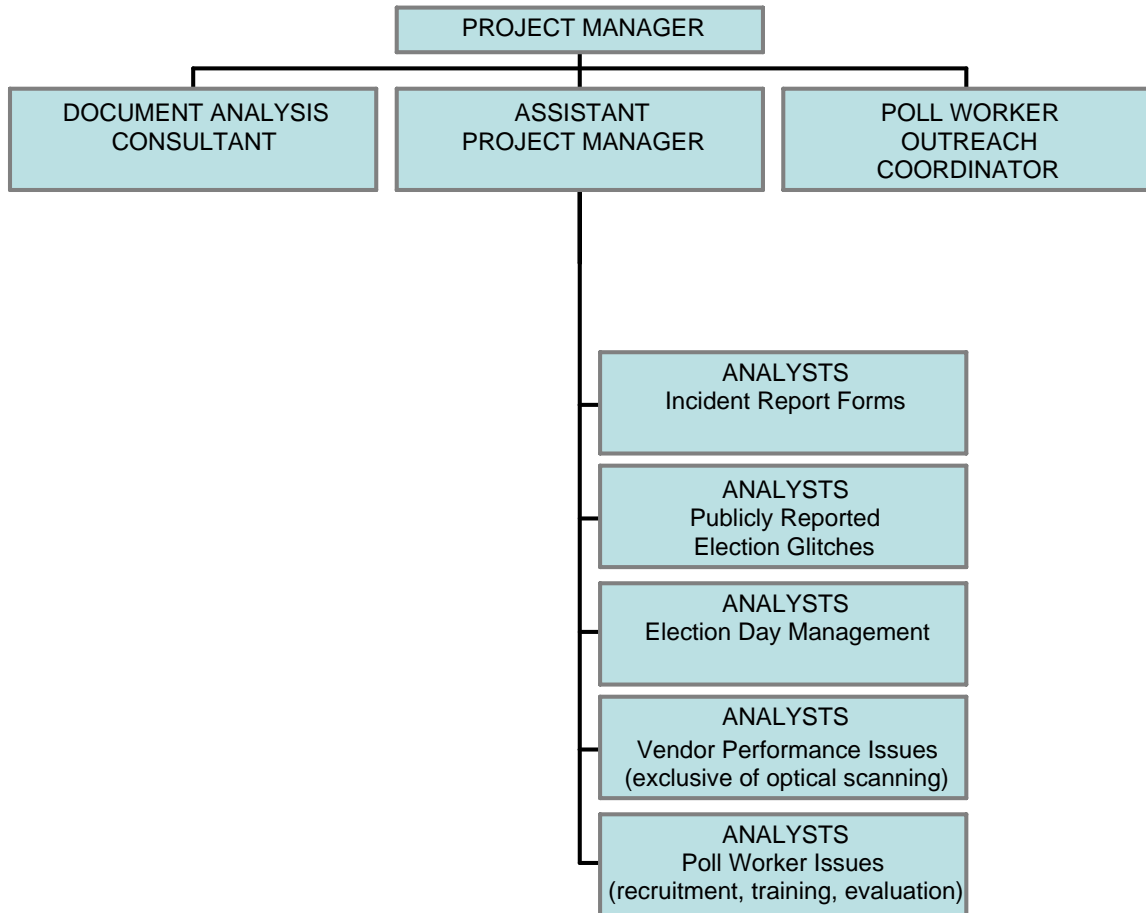
Absentee Ballot system procedures and performance including:

- Assess contract compliance by Diebold and MCR
- Timeliness of procurement process by CCBOE
- Evaluate absentee ballot system testing including L&A test and ballot test packs
- Evaluate IV&V testing by Secretary of State
- Evaluate printed ballots for accuracy for all ballot styles
- Timing marks
- Assess alternate ballot count procedures used for unofficial and official count
- Evaluate the absentee ballot counting system to determine reason for failure during unofficial count and assign responsibility for system failure
- Evaluate absentee ballot system performance during February Special Election and any corrective actions

Election Science Institute (Contract)

- Exit polling of voter satisfaction with electronic voting
- Evaluate need for additional machines based on failure rate
- Compare manual count with electronic vote
- Compare memory cards to manual count
- Review election process for security threats

Appendix C. Panel Organization Chart



Appendix D. Staff Member Overview

<u>Position</u>	<u>First</u>	<u>Last</u>	<u>School</u>	<u>Degree /Year in School</u>
Project Manager	Rachael	Balanson	Maxine Goodman Levin College of Urban Affairs	M.P.A.
Legal Analyst	Laura	Black	Case Western Reserve Law School	3L
Legal Analyst	Kevin	Burns	Georgetown Law Center, Washington D.C.	LL.M. Candidate 2007
Legal Analyst	Matilda	Carrena	Cleveland Marshall College of Law	3L
Assistant P.M. / Technology	Arthur	Dexter	Cleveland State University	BA Candidate
Legal Analyst	Christine	Frieder	Case Western Reserve Law School	3L
Legal Analyst	Michael	Holbrook	Cleveland Marshall College of Law	1L
Legal Analyst	George	Inman	Case Western Reserve Law School	1L
Legal Analyst	Gabrielle	Kelly	Case Western Reserve Law School	3L
Legal Analyst	David	Kettye	Case Western Reserve Law School	1L
Legal Analyst	Lou	Kroeck	Case Western Reserve Law School	1L
Legal Analyst	David	Levine	Case Western Reserve Law School	1L
Legal Analyst	Austin	McGuan	Cleveland Marshall College of Law	3L
Legal Analyst	Suzanne	Melgun	Cleveland Marshall College of Law	2L
Outreach Coordinator	Romona	Ramos	Mercyhurst College	B.A. Political Science
Legal Analyst	Amber	Samuelson	Case Western Reserve Law School	1L
Legal Analyst	Daniel	Thiel	Cleveland Marshall College of Law	3L
Writer / Stats Analyst	Ben	Trimbell	Maxine Goodman Levin College of Urban Affairs	M.U.P.D.D. Candidate

Appendix E. Panel Members' Investigative Activity: Summary

- May 17 All - After meeting with Panel appointees, Board of Elections formally adopts charge.
- May 17 Tom Hayes (TH) – Conducted 15 staff interviews. Candice Hoke (CH) – Researched absentee ballot system consultants; logistics issues; staff recruitment and application review.
- May 18 Judge Ron Adrine (RA) - Conducted 4 BOE management staff interviews; these interviews averaged 1/2 hour each. CH – Responded to email and telephone inquiries from poll workers and citizens; logistics issues, including website; drafted poll worker and citizen surveys for website.
- May 18 RA, CH - conducted 4 additional interviews with BOE management staff; averaged between 2 1/2 and 4 hrs each.
- May 18 TH - Conducted 21 staff interviews.
- May 18 All - After meeting with Panel appointees, Board of County Commissioners formally adopts charge.
- May 19 RA, CH - Interviewed BOE Member Sally Florkiewicz.
- May 20 CH – Attended Board Meeting (CCBOE) on primary election issues.
- May 21 CH – Interviewed (with Project Manager) all finalist staff candidates.
- May 22 RA, CH - Congresswoman Stephanie Tubbs Jones Election Forum - Beachwood, Ohio.
- May 22 TH - Conducted 5 staff interviews.
- May 22 CH – Telephone interview with SysTest Representative.
- May 23 RA – Conference call with the SOS, regarding investigative priorities.
- May 23 TH – Conducted 12 staff interviews.
- May 24 TH – Conducted 1 staff telephone interview.
- May 24 RA, CH - Concluded orientation meeting with CERP Staff.
- May 24 RA, CH - Conference with CERP Project Manager and Assistant Project Manager.

May 24 All - Conference call with the other members of the Panel.

May 25 All - Briefing with Plain Dealer Editorial Board.

May 25 RA - Briefing with Call & Post Editorial Board. CH – Conducted interview with 1 member of management staff (3 hours).

May 26 TH - Conducted 1 staff telephone interview. CH – Conducted interview with 1 member of management staff, interview (2 hours).

May 30 All - Walk-through of Registration, Absentee Voting and Alphabetical Poll Books. CH – Workshop research issues.

May 30 RBA - Interview with Associated Press.

May 31 All - CERP Election Groups Forum.

May 31 All - Cong. Stephanie Tubbs Jones Cleveland Election Forum.

June 1 All - Walk-through of Candidate Petitions, Ballot Prep and Voting Devices.

June 1 RA - Board of County Commissioners retains SysTest to perform forensic Examination.

June 1 RA, TH - Met with BOE Top Management and Forensic Team from SysTest.

June 1 RA - Radio Interview.

June 1 TH - Cong. Stephanie Tubbs Jones Bedford Forum.

June 5 All - Conference call with CERP staff.

June 6 All - Conference call with CERP staff.

June 7 All - Conference call with CERP staff. RA, CH – Interviews with 3 members of management staff.

June 8 RA, CH Interview with BOE Member Edward Coaxum. CH – Worked on BOE document collection.

June 8 All - Walk-through of BOE Election Services (Warehouse)/Election Day Operations (Pink Room) & Ballot Count process.

- June 9 RA - Closing remarks for CSU Center for Election Integrity Public Forum.
CH – Attended forum.
- June 9 CERP Public Forum on Cuyahoga County Election Process
Future Activity. CH – Interview with 1 member of management staff.
- June 12 RA, CH – Interviews with 3 members of management staff (4 hours). CH
– Interviews with 2 members of management staff (2.5 hours).
- June TBA RA, CH, TH - Interview with BOE Member Loree Soggs.
- June 12 RA - 11th Congressional District Caucus Meeting.
- June 14 Delivery of Interim Report.
- June 16 RA, CH - Interview with BOE Chair Bob Bennett.

Appendix F. Press Release

**Media Advisory and Request
May 30, 2006**

Contact: Turo Dexter, 216-802-3020

The Cuyahoga Election Review Panel urgently requests that each media outlet serving Cuyahoga County convey the following information to the public:

The Election Review Panel seeks to hear from voters and other county residents on all concerns they have about elections and voting systems in this county.

The Panel was created by action of both the County Commissioners and by the Board of Election to:

4. Identify the deficiencies in the Cuyahoga County elections performance occurring in the May 2, 2006 election, including problems with (a) preparation for the election, (b) the conduct of the election on May 2, and (c) operations following the closing of the polls, including tabulating the vote.
5. Ascertain the causes and factors contributing to each aspect of deficient performance, including technological failures, and training and administrative issues.
6. Provide a set of recommendations for remedying the deficiencies and achieving the highest standards in election administrative performance.

In order to fulfill these crucial public duties, the Panel needs to hear from the voters and citizens of the County.

Please alert your listeners, readers, and viewers to these various ways they can contact the Panel to relate concerns, suggestions, and other comments:

- **Web site:** www.cuyahogavoting.org , where comments can be entered online, either anonymously or with personal contact information;
- **Phone:** **216-802-3020**, where callers can remain anonymous if desired;
- **Email:** comments@cuyahogavoting.org
- **In person** at a Public Hearing on June 9, from 1:00- 5:00 pm, at CSU's Urban College Atrium, corner of E. 18th Street at Euclid Avenue.

Interviews or further information: If your media outlet wishes to conduct an interview with Panel members about the work the Panel has undertaken to investigate and restore the integrity of the County's voting and elections processes, or has any questions or suggestions for the Panel, please contact Turo Dexter, Assistant Project Manager, at 216-802-3020.

CUYAHOGA COUNTY

Election comments wanted

The Election Review Panel investigating problems that occurred during the May 2 primary is asking voters, election workers and others with concerns about the elections and voting systems in Cuyahoga County to contact them. County residents can contact the panel online at www.cuyahogavoting.org. Voters can comment anonymously. Residents can call 216-802-3020, or e-mail comments@cuyahogavoting.org. Finally, concerned citizens can attend the public hearing on Friday, June 9, 1-5 p.m., at Cleveland State University's Urban College Atrium, 1717 Euclid Ave.

Appendix G. Congressional Contacts

Christopher Nance, Deputy District Director
Office of Congresswoman Stephanie Tubbs Jones, OH-11
3645 Warrensville Center Road, Suite 204
Shaker Heights, OH 44122
(216) 522-4900
chris.nance@mail.house.gov

Marty Gelfand
Office of Congressman Dennis Kucinich, OH-10
14400 Detroit Ave.
Lakewood, OH 44107
(216) 228-8850
marty.gelfand@mail.house.gov

Appendix H. News reports and editorials about the May 2, 2006 Primary Election

THE PLAIN DEALER

Elections board opens probe into voting fiasco

Tuesday, May 09, 2006

Joan Mazzolini

Plain Dealer Reporter

The Cuyahoga County elections board today launched an investigation into why last week's election was such a fiasco, creating a committee to probe administrative, personnel and technical issues.

The board acted at a special meeting Monday, which also featured a grim report by Elections Director Michael Vu.

Blame was widely spread, with board members especially critical of Diebold Elections Inc., manufacturer of the touch-screen machines used at the polls and optical-scan machines used to count absentee ballots.

Officials complained that the company shipped the optical-scan machines late and failed to provide general technical help when it was most needed.

But voter advocates reminded the board that they had warned well before the election that poll-worker training was inadequate and that confusion would reign at the polls.

And Diebold spokesman Mark Radke, who was not invited to speak, said afterward that his company sent 115 people to Cuyahoga County to help poll workers on Election Day when it became clear that many poll workers were not showing up to work.

Radke defended the machines, pointing out that 47 other Ohio counties used the same machines without problems. All those counties used the same Dayton-area company to print the paper ballots, while Cuyahoga County used a local printer.

Radke also argued that board officials themselves are responsible for the late arrival of the optical-scan machines, which weren't ordered until mid-March.

But Vu said it was clear after several test runs that the optical scanning process wasn't working. That forced officials to hand-count 15,000 absentee ballots, which in turn created a domino effect that brought everything else to a virtual standstill.

"It turned our attention from poll workers and voters to hand-counting," said Vu.

Less attention was given during Monday's meeting to the other major problem: that poll workers lost 70 computer memory cards holding vote totals from hundreds of precincts.

Vu conceded that some memory cards -- seven to 12 -- are still unaccounted for. Election officials were able to get results in those precincts only by reading the "flash memory" on touch-screen machines, a sort-of temporary data storage.

Elections board Chairman Bob Bennett announced two members of the committee, Cleveland State University law professor Candice Hoke and Ohio Lottery director Tom Hayes.

Hoke will be in charge of investigating the adequacy of the training poll workers received. Hayes, who was director of the elections board in the mid-1990s and is a running buddy of Vu, will oversee a probe of the board's administrative and election procedures.

Bennett said others would soon be named to the committee.

"I can assure you it will be independent and thoughtful," Bennett said.

He added that the results of the investigation, due by mid-July, could result in resignations by board members or the removal of board members by the secretary of state.

The internal investigation was ordered by the Secretary of State Ken Blackwell's office on Friday. The secretary's office has also given board officials until Wednesday to submit a written plan on how they will conduct the official canvass -- essentially a recount to ensure accuracy before the election is deemed official.

As part of the canvass, board employees will have to recount paper ballots cast by absentee voters. The first hand count took six days of 24-hour counting. The canvassing must be completed by May 23.

Also Monday, the Ohio Democratic Party called on Blackwell to step aside from the investigation, saying he has "numerous" conflicts of interest, including his candidacy for governor. The party called for appointment of a "special master" to handle the probe.

To reach this Plain Dealer reporter:
jmazzolini@plaind.com, 216-999-4563

THE PLAIN DEALER

A primary post-mortem

A good, hard, independent look at Election Day mishaps is the first step toward a better performance in November

Wednesday, May 10, 2006

With the unofficial count of last week's primary ballots finally done, the Cuyahoga County Board of Elections now must begin restoring its credibility in advance of November's high-turnout main event.

The board has to get this right. Nothing less than public confidence in the democratic system is at stake. There can be no more excuses.

At a special meeting on Monday, Chairman Robert Bennett announced that a committee of outsiders would investigate last week's problems and recommend reforms.

Bennett promised that the committee would be independent and that its work would be open to the public. We intend to hold him to his word.

Bennett also announced two lead investigators: S. Candice Hoke, the law professor who runs Cleveland State University's Center for Election Integrity, will focus on poll worker recruitment, training and performance; Ohio Lottery Director Tom Hayes will examine the election board staff's performance. Bennett and his three board colleagues are still looking for candidates to lead the overall probe, to zero in on last week's technical glitches and to fill out the investigative team.

Hoke and Hayes are a good start. They need to be joined by others of similar talent and integrity who reflect this community. The overall leader needs to be someone of unquestioned fairness who will be unafraid to go wherever the facts lead - someone like retired Common Pleas Judge Burt Griffin or Cleveland Municipal Judge Ronald Adrine.

The investigators need to figure out what went wrong with the system for counting some 17,000 absentee ballots. The vendor who printed the ballots and the one who made the optical scanners blame each other. Responsibility needs to be pinpointed, both to fix the problems and to determine who should reimburse taxpayers for the cost of a long hand count.

That count divided the board's attention on a day when the county was using touch-screen voting machines for the first time. Most worked fine, as did most poll workers. But a disturbing number of workers did not know what to do, either when machines went haywire or when it came time to close the polls. Elections boss Michael Vu admitted Monday that training was inconsistent and that not every worker got complete instructions. Layer on those who did not grasp what they were told, add in those who simply didn't show up, and you had a fiasco in too many precincts.

Here's one thing that may help in November: Rather than depending on well-meaning volunteers to staff the polls, use county employees wherever possible. In particular, put county supervisors in charge of polling sites, especially those with poor track records. They could get extra training and, unlike volunteers, could be held responsible if problems aren't addressed.

November's election will be critical to Ohio's future. Cuyahoga County's votes must be cast and counted without the hand-wringing, finger-pointing and uncertainty of the past week.

THE PLAIN DEALER

Diebold voting machine spurs security concerns

Thursday, May 11, 2006

Dan Goodin

Associated Press

San Francisco- Officials overseeing elections in three states have directed local authorities to take additional security measures with a popular type of electronic voting machine to prevent election fraud.

California, Iowa and Pennsylvania issued the voting directives in recent weeks after researchers discovered a feature that could allow someone to load unauthorized software on Diebold Election Systems computerized machines.

Diebold is a unit of Green, Ohio-based Diebold Inc.

A hacker theoretically could use the software to rig or sabotage an election or to perform some other unauthorized function, said Michael Shamos, a computer science professor at Carnegie Mellon University.

"It's worse than a hole," said Shamos, who has been briefed on the vulnerability of the Diebold machines. "It's a deliberate feature that was added by Diebold that we all believe is unwise."

In the wake of the ballot-tabulating problems that plagued the 2000 presidential election, electronic voting has become a flash point for many people concerned about fair elections. Critics charge that electronic voting machines are too susceptible to fraud and error to be trusted and should not replace traditional balloting until proper safeguards are installed.

Diebold spokesman David Bear said there is no evidence electronic results have been subject to tampering. He added it would be hard for anyone to exploit the recently discovered flaw if officials follow security procedures already in place, but that Diebold is developing a permanent solution to address concerns.

THE PLAIN DEALER

Voting machines a winner in poll: But problems being probed

Saturday, May 13, 2006

Grant Segall

Plain Dealer Reporter

When the new machines worked, the voters loved them.

An exit poll shows this rare bit of good news from Black Tuesday - Cuyahoga County's sputtering May 2 primary.

"The voters were overwhelmingly satisfied with the system," Steven Hertzberg, project director of Election Science Institute, said Friday.

Still, an independent committee began Friday to investigate the primary's many problems, including missing memory cards, hours of delay in opening some polls and days of delay in counting absentee ballots by hand.

The committee's chairman, Judge Ronald Adrine of Cleveland Municipal Court, hopes to help the county elections board do much better in November's general election.

"I am absolutely hopeful that we'll be able to turn it around," said Adrine.

The committee's other members are Thomas Hayes, Ohio Lottery director and the board's former director; and Candice Hoke, a law professor running the Elections Institute at Cleveland State University.

The exit poll reflects 2,597 voters at 50 locations. Among the highlights:

Ninety-five percent of the voters called the new touch-screens easy to use.

Ninety-two percent said the screens beat the old punch cards.

Ninety percent reported no problems with them.

Ninety-four percent were confident that their votes would be counted correctly.

On a troublesome note, 35 percent of Clevelanders said they'd been asked for identification, versus 16 percent of suburbanites. The gap was nearly as wide between black voters (31 percent) and white voters (18 percent).

The immediate issue may be moot in November, when all voters will need IDs. But county official Hugh Shannon promised that the staff would investigate whether the gaps reflected valid differences or unequal treatment.

People should have been asked for identification this month only if voting for the first time at their current address or at all.

The nonprofit Election Science Institute of San Francisco got help with the poll from Edison Media Research of New Jersey. Edison is best known for a 2004 exit poll off by a fateful couple of points, showing a win for John Kerry in the presidential election.

Under a \$275,000 county contract, Election Science will continue to study the May 2 vote, partly by auditing the tallies on three kinds of media: paper, memory cards and the machines' internal records.

County commissioners are expected Thursday to give Election Science \$66,000 more to survey poll workers about their struggles with the machines.

To reach this Plain Dealer reporter:
gsegall@plaind.com, 216-999-4187

THE PLAIN DEALER

Cuyahoga aiming for better result in election Board's procedures to be reviewed, changed

Thursday, May 18, 2006

Joan Mazzolini

Plain Dealer Reporter

Look for big changes for this November in how Cuyahoga County recruits and trains precinct workers for Election Day.

The panel investigating the May 2 election debacle said Wednesday it would come up with a system for finding competent people to work the polls and a program to give those people all the training necessary to guarantee a successful election.

"We see our primary responsibility to get this board ready for November and to restore public confidence in the election system," said Candace Hoke, a law professor running the Center for Election Integrity at Cleveland State University.

The three-member election review panel worked out the scope of the investigation Wednesday with Bob Bennett, elections board chairman. Essentially, the panel will conduct a wholesale review of how the board runs elections. The panel will examine how the board prepares machines for election day, sets up poll locations, designs ballots and awards contracts.

Panelists told Bennett they need a specialist to help figure out why the county's new optical scanners failed to accurately read absentee ballots. The failure resulted in the board hiring an army of temporary workers to hand-count 17,000 absentee ballots, which delayed election results for six days. The specialist would be an expert in ballot printing and Diebold Inc. election machines.

Cleveland Municipal Judge Ronald Adrine and Thomas Hayes, Lottery Commission director and former elections board director, are on the panel with Hoke. They said they plan to hire law students from CSU and Case Western Reserve University to help them review all the data and come up with ways to fix the system.

A report is due to the elections board July 14. With a big November election looming - the governor, a U.S. Senate seat and all seats in Congress are up - board officials will have little time to revamp procedures.

The voting machines were just part of the problem May 2. Nearly 20 percent of the poll workers did not show up, leading many polling locations to open late. Then, after the

polls closed, workers lost more than 70 memory cards from the machines. The cards store the votes.

Elections board officials still haven't accounted for about a dozen of the cards but hope to find them during the official, final vote count, due at the secretary of state's office Tuesday.

For the official count, elections officials decided not to repeat the hand-counting of the absentee ballots. Instead, workers entered votes recorded on the paper absentee ballots into touch-screen machines.

Michael Vu, executive director of the elections board, said the counts haven't been compared with the unofficial count completed last week.

He expects the counts to differ. He said hand-counting is the least accurate method.

To reach this Plain Dealer reporter:
jmazzolini@plaind.com, 216-999-4563

THE PLAIN DEALER

How the vote got messed up

Lorain kept election schedule; Cuyahoga problems snowballed

Wednesday, May 31, 2006

Joan Mazzolini

Plain Dealer Reporter

A lot had to happen, on time, for the May 2 primary election to be successful in Cuyahoga and Lorain counties.

Both counties were using Diebold's new optical scanners to count absentee ballots, so they had technical challenges to overcome.

Both counties had to modify the machines, wiring them directly into elections computers to bypass the limited capacity in the machines' memory cards.

Both counties also needed big stacks of test ballots to run through the machines to see if they counted accurately.

Both counties needed to test the machines well before Election Day, leaving enough time to fix anything that did not work.

But only one county, Lorain, met the deadline. Cuyahoga was a step behind from the start and never caught up.

The result was that Lorain County voters learned the results of their elections May 2. Cuyahoga voters waited five more days.

Lorain County had one advantage. It had the four optical scanners it needed on hand six months before Election Day. Cuyahoga County, nearly five times the size of Lorain,

received five machines from the secretary of state's office in January, but it had been lobbying for more since late December.

After months of back-and-forth discussions, Cuyahoga received 15 more optical scan machines April 14, just 18 days before the primary.

"Things were running late," said Michael Vu, director of the Cuyahoga County Board of Elections. "But it was more global, it wasn't just localized to the board."

One of the key problems involved the memory cards for the machines. They did not have the capacity to hold the 2,000 different ballots to be used in Cuyahoga County for the primary.

Diebold consultants in both counties told election officials they were pushing the state to approve modifying the machines to get around the memory cards. The modification, used in other states, wires the machine to election computers, which contain all forms of the ballots.

Ohio's Board of Voting Machine Examiners certified the modifications in mid-February.

But the two counties differed in their approach to the changes.

Lorain elections officials ordered the equipment they needed from Diebold on April 12, said Marilyn A. Jacobcik, director of the Lorain County Board of Elections.

The equipment arrived the next day, on April 13, and the county's four machines were wired into elections computers that afternoon, Jacobcik said.

Cuyahoga County went to other vendors for the equipment and didn't get everything it needed until April 25, seven days before the primary.

"We received something from Diebold showing the cost would be nearly \$6,000," Vu said. "Anything over \$5,000 we have to bid."

Vu said two other vendors came in less than \$6,000.

Going with another vendor created a new problem, with board officials needing confirmation from Diebold that they were buying the right equipment.

"We tried to get confirmation on April 10 . . . but we didn't get a response back until April 18," Vu said.

Then, Vu said, the Diebold consultant adapting the machines didn't get training on the conversion until April 22.

"We're now a week away from the election," Vu said. The modifications were not complete until April 28 or 29, four days before the primary.

Even if the machines had been ready earlier, Cuyahoga County didn't have ballots to conduct tests.

Lorain election officials ordered their absentee and test ballots in early January and had the absentee ballots in hand by early April, the same time Cuyahoga's four-member board was getting around to picking a printer to do the ballots.

The test ballots for Lorain arrived April 14, and by the 19th, the testing of the optical scan machines was complete.

"It was a little later than we would have liked," Jacobcik said of the testing. But she said the conversion from punch ballots to electronic voting "was a learning experience."

In Cuyahoga County, elections officials and Diebold representatives were worrying in mid-April that their test ballots wouldn't arrive in time.

The printer, MCR Inc., gave assurances to the county, but the test ballots did not arrive until April 30, two days before the primary.

On May 1, testing began. By 2:30 a.m. Election Day, elections officials realized that machines were not counting accurately and decided not to use them.

Instead, temporary workers began hand-counting 15,000 absentee ballots on Election Day. They finished five days later.

To reach this Plain Dealer Reporter:
jmazzolini@plaind.com, 216-999-4563

Spate of lawsuits target e-voting

By Patrick O'Driscoll, USA TODAY

Posted 6/4/2006 11:15 PM ET



By Bill Kalina, The York
Dispatch via AP

E-VOTES INCREASE

Percentage of registered voters whose jurisdictions use electronic voting machines:

2000: 12.6%

2002: 22.5%

2004: 28.9%

2006: 39.1%

Source: Election Data Services

Machine Inspector Fran Eck, left, and Judge of Elections Belita Rosier prepare the polling station at Lutheran Nursing Home in York, Pa., May 16. Electronic voting machines debuted during this primary election, but lawsuits have targeted the devices in Pennsylvania and other states.

DENVER — Electronic voting machines, adopted widely after the disputed Florida ballot count in the 2000 presidential election, are under legal attack as primary election season heats up.

Lawsuits have been filed in at least six states, the most recent last week in Colorado, to block the purchase or use of computerized machines.

Voter Action, a non-partisan advocacy group, led the challenge filed Thursday against the state of Colorado and nine counties, as well as similar lawsuits in California and Arizona this spring and New Mexico last year. Court actions by others targeted the devices in Florida, Ohio and Pennsylvania.

Most of the suits argue that the machines are vulnerable to software tampering, don't keep an easily recountable printed record and may miscount, switch or not record votes and even add phantom votes.

In California, one of eight states holding primaries Tuesday, a lawsuit in March led several counties to switch to printed ballots counted with optical scanners, a competing technology. Six of the eight states will have some electronic balloting, which records votes by touch screens.

Texas and Illinois had some problems using electronic voting machines during their March primaries.

About one-third of the USA's 3,114 counties use some electronic systems, according to Election Data Services, a consulting group. It says half the counties use optical scanners that read dots or marks that voters pencil in on ballots.

The rest vote by other means, mostly hand-counted paper ballots in smaller communities but also lever-type machines in New York and Connecticut.

No case yet has claimed intentional manipulation of electronic vote data. But another advocacy group, Black Box Voting, reported last month that a Finnish expert found security flaws for a Diebold Election Systems model.

Diebold, a major manufacturer, says the vulnerability is theoretical and will be fixed this year.

System defenders say most problems occur because of hasty set-up before elections or poor training of poll workers. "Certainly none of the allegations of security breaches on the equipment have ever been demonstrated to be true," says R. Doug Lewis of the Election Center, a group of state and local election officials.

Electronic voting, in use for more than a decade, didn't catch fire until Congress passed the Help America Vote Act in 2002. It overhauled election standards and required states to replace old voting methods such as punch cards, which fouled up the 2000 election in Florida. Congress also gave states more than \$300 million to replace outdated systems.

Paul DiGregorio of the federal Election Assistance Commission acknowledges some glitches but says any system "can be trusted" as long as safeguards are in place.

THE PLAIN DEALER

Blackwell gets brunt of registrants' anger He denies trying to disenfranchise voters

Tuesday, June 06, 2006

Ted Wendling

Plain Dealer Bureau

Columbus- Democrats and representatives of voter-registration groups accused Secretary of State Ken Blackwell on Monday of trying to rig this November's election by publishing draconian new rules governing the activities of people who register voters.

Testifying at a hearing chaired by Judy Grady, Blackwell's director of elections, lawyers for ACORN, Common Cause, the Ohio Democratic Party and other groups said training documents drafted by Blackwell's office are so vague that they subject registrars to felony penalties for even inadvertent violations.

As a result, ACORN, the Association of Community Organizations for Reform Now, has drastically cut back its voter-registration efforts while its lawyers review the new rules, Katy Gall, Ohio ACORN's head organizer, said in an interview.

Gall said ACORN has registered 35,000 voters in six Ohio cities since February. Its goal is 130,000.

Samuel Gresham, an attorney for Common Cause, charged that the rules are "part of a consistent pattern, intentionally so," by Blackwell to disenfranchise black, low-income and Democratic voters.

Blackwell's actions, Gresham and others said, are intended to suppress Democratic voter turnout in what is shaping up as a closely contested governor's race between Blackwell, a Republican, and Democratic U.S. Rep. Ted Strickland.

"It appears that Ken Blackwell finally figured out how to deal with long lines on Election Day," said state Democratic Party spokesman Brian Rothenberg. "He's just trying to outright deny people the right to vote now."

Those criticisms brought a scathing response from Blackwell's campaign spokesman, Carlo LoParo.

"That's outrageous," LoParo said. "The Blackwell campaign is making a very focused effort to gain the votes of Ohio's urban voters, but particularly Ohio's African-American voters, and that's because Ken Blackwell is the only candidate in this race that can articulate their concerns."

In contrast, Strickland is so out of touch with black voters, LoParo said, that "before this campaign, his idea of diversity was opting for Neapolitan ice cream at the congressional buffet."

The rules were drafted to comply with a new state election-reform law. The focus of most of the voter-registration activists' ire is a provision that says registrars must return applicants' forms "directly" to the secretary of state's office or a county board of elections.

Peg Rosenfield, elections specialist for the League of Women Voters of Ohio, said a strict interpretation of that rule means that the person who registers a voter can't even turn the form over to his supervisor for review.

Angered by the passage of a similar law in Florida, the League ceased all voter-registration efforts and sued Florida elections officials last month with the assistance of the Brennan Center for Justice at the New York University School of Law. A lawyer for the Brennan Center also testified at Monday's hearing in Columbus.

State Rep. Kevin DeWine, the legislator who sponsored the election-reform law, said he believes Blackwell's office faithfully drafted the rules to comply with the bill.

However, he said the law "might need a fix" because lawmakers didn't intend to subject registrars to criminal penalties if they turn their forms over to a supervisor for review instead of directly submitting them to the secretary of state.

To reach this Plain Dealer reporter:
twendling@plaind.com, 1-800-228-8272



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New rules criticized by voting groups

BY JOHN MCCARTHY | THE ASSOCIATED PRESS

COLUMBUS - New rules issued by the Ohio secretary of state's office governing groups that pay people to register voters are confusing and have hindered their efforts to sign up new voters, critics of the rules said Monday.

Representatives of the Ohio Democratic Party, the League of Women Voters of Ohio and groups active in registering voters said the rules developed by Secretary of State Ken Blackwell's office go beyond the law they were intended to implement.

The Legislature, controlled by Republicans, passed the bill in January. The rules covering paid circulators went into effect May 2, the day of Ohio's primary in which Blackwell defeated fellow Republican Jim Petro for the GOP nomination for governor.

The rules grew out of a bill Gov. Bob Taft signed Jan. 31 that overhauls Ohio election law. It will require voters to show identification at the polls before being allowed to vote, bars the attorney general and secretary of state from acting as treasurer or in an official capacity for ballot initiatives and sets new rules for people paid to collect voter registrations or signatures to qualify an issue for the ballot.

A rule requires paid circulators to return signed registration cards within 10 days to county boards of elections or to the secretary of state's office, not to the group paying them. That goes beyond what legislators intended, critics said.

Groups such as MoveOn.org and America Coming Together actively registered voters in the groups' attempt to defeat President Bush in 2004. Don McTigue, a lawyer representing a similar group, Association of Community Organizations for Reform Now said the rules are causing such groups to look for new voters outside Ohio.

"They want to engage in voter registration drives, but they might not be able to," McTigue told Judith Grady, Blackwell's elections director, at a hearing on the new rules.

The League of Women Voters of Ohio is being peppered with questions from groups that pay circulators, said Peg Rosenfield, the league's elections specialist.

"We need answers," she said.

The requirement to submit registrations directly to elections officials singles out groups usually associated with political causes, said Wendy Weiser, deputy director for democracy programs for the Brennan Center for Justice, a New-York based think tank.

"While a library might be able to accept a lot of individual forms and submit them in a box, a voter registration group could not," Weiser said. "It's just calculated to make it as difficult as possible."

The New York Times
Block the Vote, Ohio Remix
Published: June 7, 2006

If there was ever a sign of a ruling party in trouble, it is a game plan that calls for trying to win by discouraging voting.

The latest sign that Republicans have an election-year strategy to shut down voter registration drives comes from Ohio. As the state gears up for a very competitive election season this fall, its secretary of state, J. Kenneth Blackwell, has put in place "emergency" regulations that could hit voter registration workers with criminal penalties for perfectly legitimate registration practices. The rules are so draconian they could shut down registration drives in Ohio.

Mr. Blackwell, who also happens to be the Republican candidate for governor this year, has a history of this sort of behavior. In 2004, he instructed county boards of elections to reject any registrations on paper of less than 80-pound stock — about the thickness of a postcard. His order was almost certainly illegal, and he retracted it after he came under intense criticism. It was, however, in place long enough to get some registrations tossed out.

This year, Mr. Blackwell's office has issued rules and materials that appear to require that paid registration workers, and perhaps even volunteers, personally take the forms they collect to an election office. Organizations that run registration drives generally have the people who register voters bring the forms back to supervisors, who can then review them for errors. Under Mr. Blackwell's edict, everyone involved could be committing a crime. Mr. Blackwell's rules also appear to prohibit people who register voters from sending the forms in by mail. That rule itself may violate federal elections law.

Mr. Blackwell's rules are interpretations of a law the Republican-controlled Ohio Legislature passed recently. Another of the nation's most famous swing states, Florida, has been the scene of similar consternation and confusion since it recently enacted a law

that is so harsh that the Florida League of Women Voters announced that it was stopping all voter registration efforts for the first time in 67 years.

Florida's Legislature, like Ohio's, is controlled by Republicans. Throughout American history both parties have shown a willingness to try to use election law to get results they might otherwise not win at the polls. But right now it is clearly the Republicans who believe they have an interest in keeping the voter base small. Mr. Blackwell and other politicians who insist on making it harder to vote never say, of course, that they are worried that get-out-the-vote drives will bring too many poor and minority voters into the system. They say that they want to reduce fraud. However, there is virtually no evidence that registration drives are leading to fraud at the polls.

But there is one clear way that Ohio's election system is corrupt. Decisions about who can vote are being made by a candidate for governor. Mr. Blackwell should hand over responsibility for elections to a decision maker whose only loyalty is to the voters and the law.