



Touch the Future of Voting: Georgia's Guide to Election Reform

**A Report by
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Executive Summary

The 2002 General Election was a milestone in Georgia history. In addition to historic election returns resulting in the state's first Republican Governor in 132 years, Georgia also became the first state in the nation to successfully implement a statewide uniform electronic voting system. Georgia's successful transition to new electronic voting equipment, at a time when many naysayers said it could not be done, was the result of an in-depth analysis of the accuracy and accessibility of available voting systems, an extensive statewide voter education and poll worker training program and an unprecedented partnership between state and county governments.

In the nine months since that historic election, numerous success stories have emerged from nearly every corner of our state. Two themes quickly emerged: Georgia voters young and old embraced and expressed confidence in the new voting system and our state's undervote rate was dramatically reduced with our electronic voting platform.

Empirical evidence of these voter sentiments came in February 2003 when the University of Georgia's Carl Vinson Institute of Government released the results of an independent poll showing Georgians' confidence in the voting process increased significantly following the adoption of the state's electronic voting platform in November 2002. The study also indicated that 97 % of respondents reported that they had no difficulties using the new touch screen voting terminals.

According to the poll, 70 % of Georgians reported being "very confident" that their vote was accurately counted – up from 56 % when that same question was posed in September of 2001 (prior to the adoption of a statewide uniform electronic system). Overall confidence in the voting process (including both "very" and "somewhat") grew to 93 % following the November 2002 election – an increase of nearly 20 % over the 2001 results.

The survey also indicated that only a tiny fraction of voters experienced problems using the new equipment. Some 97 % of those surveyed said they "experienced no difficulties" using the electronic voting terminals.

The Vinson Institute's survey, which polled 800 randomly selected adults and is projected to have a margin of error of +/- 3.5 %, demonstrates that voters found the equipment easy to use and they are now much more confident in the accuracy of the voting process.

Georgia voters had good reason to feel confident about the new touch screen machines. A comparison of the state's undervote rates in the past two General Elections showed the accuracy of Georgia's voting equipment improved dramatically with an impressive reduction in undervote rates across the board.

In the 2000 Presidential Election, Georgia's undervote percentage of 3.5 % put Georgia at or top among states in the percentage of ballots that showed no choice for President. With the implementation of touch screen voting machines, our state's top-of-the-ticket undervote rate dropped significantly to 0.87 % in the 2002 General Election.

An “apples to apples” comparison is the 2002 U.S. Senate race (Cleland vs. Chambliss) vs. the 1998 U. S. Senate race (Coverdell vs. Coles). In both cases these were the top-of-the-ticket ballot choices facing voters.

Five years ago, under Georgia’s antiquated voting platforms (including punch card, optical scan, lever machine and paper ballot), the U. S. Senate undervote was 4.8 % of ballots cast – some 88,674 ballots with no Senate choice out of 1,842,585 ballots cast. The 2002 undervote of only 0.87 % represents a reduction of nearly four percentage points and a drop in undervotes of nearly 70,000 statewide. Eliminating such a large number of “lost votes” is particularly significant since in the last two decades five major statewide races for Governor or U.S. Senate have been decided by margins of less than 32,000 votes.

The dramatic improvement in accurately garnering the true intent of the voter is even more remarkable in many rural counties that showed extremely high Senate undervote percentages in 1998. Our analysis spotlighted 29 Georgia counties that, five years ago, showed U.S. Senate undervote percentages of 15% or more. In the 2002 Senate election, undervotes in these counties, in every instance, dropped precipitously, and 26 of the 29 counties showed 2002 undervote rates of less than 3 %. In county after county, voters in 2002 were much more likely to record a valid choice in the U. S. Senate race than they were four years prior.

This data, coupled with the results of the University of Georgia’s independent survey, provides powerful evidence of the success of our electronic voting equipment deployment. Georgians can be proud that their state leads the nation in reforming election procedures and processes and ensuring the highest possible level of accuracy in the voting process.

Introduction

Georgia's response to the chaos of the 2000 presidential election stands alone. Uniquely among states, from the beginning Georgia set a course that focused on finding the best uniform solution that would meet the needs of voters in all 159 Georgia counties.

In its 2001 session the Georgia General Assembly passed SB 213, unanimously in the Senate and with only one dissenting vote in the House. This bipartisan legislation, proposed by Secretary of State Cathy Cox, set forth an action plan to send Georgia to the head of the line in election reform efforts, including a mandate that the state move to a modern, uniform voting system to be acquired solely with state, rather than county, resources.

The bill created a 21st Century Voting Commission to evaluate equipment alternatives, study the experiences of other states and counties, conduct public hearings, oversee a pilot test of electronic systems in the 2001 municipal elections, and make recommendations to the General Assembly and Governor on the equipment solution that would best meet the needs of Georgia voters. The multi-partisan nature of this initiative was reflected in the membership of the Voting Commission – eight nonpartisan, four Democrat, four Republican, one Independent and one Libertarian. The Commission gained valuable, real-world experience with electronic voting systems during a November 2001 municipal pilot program. The pilot utilized equipment from six manufacturers deployed for use in regularly scheduled elections in 13 Georgia towns and cities. Exit polling of nearly 2,200 voters who cast ballots on the equipment was extremely positive, with 94.5 % of respondents indicating that Georgia should upgrade its voting system to an electronic platform.

In its report to the Governor and General Assembly released in December 2001, the Voting Commission unanimously endorsed the concept of moving Georgia to a uniform system of DRE (direct recording electronic) voting, with optiscan as the uniform solution for absentee voting by mail. Governor Barnes subsequently recommended, and the General Assembly approved (again with broad bipartisan support), \$54 million in state bond funds to acquire and deploy the new voting system in time for the November 5th, 2002 General Election.

Of critical importance, Secretary of State Cox also sought and obtained approximately \$4.5 million in additional budget funds (spread over two budget years) for a wide ranging set of programs to support the deployment, including statewide voter education, election staff and poll worker training, equipment acceptance testing and other assistance. The contract entered into with Diebold Election Systems also assured that extensive training, technical support, warranty coverage and other enhancements would be provided at no cost to the counties for the initial phase.

Unlike its peers, Georgia's election reform model committed unprecedented state resources to assure that counties had the tools they need for a smooth deployment of accurate, accessible and user-friendly equipment. This strong state-county partnership set Georgia apart in the drive to modernize election systems in America.

Definitions and Glossary

Absentee Ballot: A ballot cast by a voter not at their physical polling location. Absentee voting is permitted in Georgia only for certain specified reasons. Under Georgia's new uniform system all absentee ballots are cast in an optical scan format.

Acceptance Testing: Diagnostic testing of each voting terminal, server, optical scan ballot tabulator and ballot encoder to determine that all components are working properly. Georgia law requires that all new voting equipment undergo Acceptance Testing.

Accumulate: The process by which, at the conclusion of voting, each memory card from all the voting units in a specific precinct are loaded, one by one, onto a single designated voting terminal and "accumulated" to generate a precinct vote total for all races on the ballot. Some Georgia precincts will choose to compile precinct vote totals this way, while others will skip this step and simply post printed totals from each individual voting unit.

Accuvote TS: The brand name of the electronic voting terminals that will be used in all of Georgia's 2,926 precincts. The units, along with other components of the voting platform, are manufactured and supported by Diebold Election Systems.

Audio Ballot: A version of a ballot presented in audio form for use by blind and visually impaired voters. The Diebold voice-guided audio ballot system includes headphones and a numeric keypad. The candidates and questions on the ballot are heard over the headphones, prompting the voter to respond by touching the corresponding number on the keypad. Because of the accessibility of Georgia's new electronic system, for the first time the blind and visually impaired can vote independently and without assistance.

Audit Trail: A term used to describe the written and electronic record of all ballots and voting procedures. The audit trail can be examined if questions are raised about the accuracy of the vote count.

Ballot Style: The particular candidates and choices which are associated with an individual voter at a specific address. In some Georgia precincts all voters receive the same ballot style, while other precincts include one or more precinct "splits" created by county, municipal or state district boundaries. In a split precinct, the voter receives a voter access card encoded with the ballot style applicable to his/her address.

Card Reader: The component of the touch screen voting terminal that accepts the voter access card, "reads" it and initiates the voting process.

De-Select Feature: When using a touch screen voting terminal a voter may change their choice by touching their selection a second time, then making a new choice.

Diebold Election Systems: A division of Diebold, Inc., the manufacturer and supplier of all components of Georgia's uniform voting system, including more than 22,000 electronic voting terminals. Diebold is the world's leading election solutions provider.

DRE Direct Recording Electronic: The acronym used in the elections industry to describe a category of voting system in which voters make their selections directly into an electronic device, rather than through paper or mechanical media. Georgia's new touch screen voting terminals are DREs.

Election Supervisor/Probate Judge: The chief election official within a Georgia county. In counties with appointed election boards, the Election Supervisor is appointed to operate all county election functions. In many, mostly rural, Georgia counties the chief election official is the probate judge, an elected county position.

Encoder: A small push button electronic device used by poll workers to authorize a voter access card. To authorize a voter card the poll worker slips it into the encoder and pushes the appropriate buttons. The encoder sends an electronic message to the card carrying with it the particular ballot style that should be displayed for the voter.

Flash Memory: The type of memory used in the touch screen voting terminals in both the removable memory cards and on the motherboard. Flash is a non-volatile memory device that retains its data after the power is removed. Flash memory does not need a constant power supply to retain its data and it offers extremely fast access times, low power consumption, and relative immunity to severe shock or vibration. These qualities combined with its compact size, make it ideal for portable devices like digital cameras, cell phones, pagers, handhelds and printers.

GEMS Global Election Management System: The software program, operating on Microsoft Windows NT/2000 platform, that allows the election administrator to control every step of the election process, from ballot layout to election reporting. GEMS is loaded onto the computer server provided to each county elections office as part of Georgia's turnkey elections solution.

Georgia Counts: The theme for Georgia's multi-faceted voter education program, including in-person demonstrations to thousands of groups, educational videotapes, direct mail informational brochures, television PSA's, a toll-free answer line, a website and other educational components.

KSU Center for Election Systems: Operating under contract with the Georgia Office of Secretary of State, a facility at Kennesaw State University staffed by computer science faculty and students to provide a wide range of support services for Georgia's transition to a new electronic voting platform. The Center's staff has conducted testing on more than 22,000 voting terminals and related components and provides extensive poll worker training and help desk support to county election officials.

Logic and Accuracy Testing: An additional level of testing, conducted after Acceptance Testing, that checks the performance of all systems and verifies that the specific ballot information for each memory card in each precinct is correct and that votes cast on the system are properly recorded on the voting terminal. After "L&A" is completed, units are set in election mode, powered down, locked and banded with a seal that is not broken until election day morning.

Memory Card: A removable card, similar to those found in digital cameras, that holds the appropriate ballot information and records the votes. The memory card installed in the Accuvote TS unit operates on Flash memory. In addition to the memory card, votes cast on the electronic terminals are recorded on two separate locations on the motherboard of the voting unit itself.

Microsoft Windows CE: A pared-down version of Microsoft Windows (the most widely-used software in the world) that provides the operating system for the Accuvote TS units. Windows CE is used in PDAs and other mobile and small footprint electronic devices.

Municipal Pilot Project: Georgia's pilot project, held in November 2001, to test electronic voting equipment in 13 towns and cities during their official municipal elections. One of the largest field tests ever conducted of electronic voting equipment, involving six DRE manufacturers, the Pilot Project helped establish a clear roadmap for deployment of the statewide system.

NASED: The National Association of State Election Directors, responsible for administering and applying the standards for voting equipment accuracy and functionality established in cooperation with the Federal Elections Commission.

National Certification: In order for a voting system to earn national certification, successful completion of extensive testing at two advanced laboratories (for both hardware and software) in Huntsville, Alabama is required. All components of a voting system are subjected to "torture testing" in order to assure their accuracy, reliability and security. National certification standards are set by NASED.

Optical Scan Ballot: A voting system in which choices are made by using a pencil or marker to fill in a circle adjacent to a ballot choice. Under Georgia's new uniform system all absentee ballots are cast in an optical scan format. To be counted, ballots are fed into a ballot tabulator that is programmed to read the blackened circles as vote choices.

Overvote: The inadvertent selection by a voter of more than one candidate in a single race. One of the strengths of Georgia's new electronic system is that it does not allow voters to cast an overvote.

Provisional Ballot: New in Georgia in 2002 (and soon to be required of all states by the new federal election reform legislation), a ballot created for those who appear at their voting location and whose voter registration cannot be verified. When that occurs, the voter is offered a provisional (optical scan paper) ballot that, once voted, is segregated from other votes cast in the precinct. After voting is completed, the voter registrar has two days to determine if the individual was in fact registered and whether their vote should be counted.

Results Tape: A paper tape (similar to a cash register tape) printed at the conclusion of voting on each voting terminal in a precinct. The results tape provides a tally of all votes on all races and questions cast on that unit that day.

SB 213: Bipartisan legislation proposed by Secretary of State Cathy Cox that set forth an action plan to make Georgia first in the nation in election reform efforts, including a mandate that the state move to a modern, uniform voting system for to be acquired solely with state, rather than county, resources. SB 213 was enacted by the Georgia General Assembly in 2001, unanimously in the Senate and with only one dissenting vote in the House, and later signed by Governor Roy Barnes.

State Certification: Extensive testing of all hardware and software systems is required before a voting system earns certification for deployment in Georgia, a requirement of state law. State certification testing is conducted by election experts at Kennesaw State University, with the participation of county election officials.

SUEVI Statewide Uniform Electronic Voting Initiative: The acronym for Georgia's election reform efforts that began in 2000.

Summary Page: In Georgia's new touch screen system, the last screen of the ballot which provides voters with a summary of the ballot choices they have made and a final opportunity to change their selections. The summary page is a vital feature that provides voters with feedback about their choices before their votes are recorded.

Touch Screen: A user interface that allows the voter to make selections by using a finger to point directly to choices displayed on the screen, made possible through a touch-sensitive membrane.

21st Century Voting Commission: Authorized and created by SB 213, the Commission is a bipartisan panel of election officials, community and civic leaders and members of the General Assembly charged with setting the course for Georgia's election reform efforts. The multi-partisan panel of eight nonpartisan, four Democrat, four Republican, one Independent and one Libertarian members researched equipment alternatives, oversaw the municipal pilot project and unanimously recommended to the General Assembly the adoption of a uniform electronic voting system for Georgia.

Undervote: The difference between the number of ballots cast and the number of votes recorded in an individual race.

VECs Voter Education Coordinators: A staff of Election Division employees deployed into 12 regions around the state to conduct voter education and assist county election offices with their own educational and training programs.

Voter Access Card: A small plastic card, similar to a hotel key card, that is used to unlock the voting terminal and load the ballot style appropriate for each voter. The voter access card, which incorporates a small computer chip, contains no personal information about the voter and must be encoded by a poll worker before the voting process begins. After voting is completed the card is ejected from the voting terminal and is returned to a poll official.

Zero Tape: A paper tape printed on each voting terminal before voting begins on Election Day. The zero tape is printed as proof that no votes have been recorded on the equipment; it is signed by poll workers, retained and submitted to the central elections office at the conclusion of voting.

Chronology of Important Events Leading Up to Election Day 2002

- November 7, 2000
- A razor-thin margin in the presidential race in Florida prompts recounts, litigation and intense media and public scrutiny of the shortcomings of election systems and procedures for casting and counting votes.
- Mid-November 2000
- Secretary of State Cathy Cox directs her staff to begin to compile and analyze data on undervotes in Georgia. Initial findings show that some 3.5 %, or about 94,000 ballots, showed no choice made in the presidential race. That percentage well exceeds the national average of 1.9 % and Florida's undervote percentage of 2.9 %. The study also finds significant variations from county to county and divergent performance within equipment type.
- December 2000
- The Secretary of State's office begins to prepare an extensive report on shortcomings in equipment and other election-related policies and procedures to be submitted to the Governor and members of the General Assembly. In addition to data on undervote performance the report analyzes problems identified by local election officials and the public at large, drawn from testimony at public hearings and hundreds of letters, phone calls and e-mails sent to the Secretary of State's office.
- January 2001
- Secretary of State Cox issues her report, *The 2000 Election: A Wake-Up Call For Reform and Change*. The report includes a host of recommendations to make elections more accurate and convenient. Most significantly, it advocates the adoption of a single, uniform system of voting for all 159 Georgia counties, with state government taking the lead role in funding and deploying such a system.
- February 2001
- On behalf of Secretary of State Cox, Senator Jack Hill introduces SB 213 that includes a wide range of election reforms, including a mandate to adopt a uniform system of voting by July 2004. The bill also authorizes the DRE pilot project and creates the 21st Century Voting Commission to oversee it and make recommendations on how Georgia should proceed.
 - The Secretary of State's office undertakes a more detailed analysis of undervote data, focusing on differences that occur from precinct to precinct within the same county using the same equipment. The study finds that while undervoting is almost always more common in predominately African-American precincts, the gap between Black and White undervoting rates is actually highest not in punch card counties, but in counties using optical scanning equipment.
- March 2001
- SB 213 is passed, unanimously in the Senate and with only one dissenting vote in the House.
 - The General Assembly appropriates \$200,000 in supplemental funds to underwrite the costs of the DRE pilot project and the work of the Commission.
 - Secretary Cox is invited to testify before the U. S. Senate Commerce Committee, chaired by Senator John McCain, on Georgia's election reform efforts, and the findings of the undervote study.

- National manufacturers of DRE equipment are invited to submit their equipment for Georgia certification testing. Out of eight vendors who initiated certification, six ultimately will complete the process.
 - Georgia municipalities begin to apply to be selected as a pilot project city.
 - Secretary Cox testifies before the National Commission on Federal Election Reform, chaired by former Presidents Jimmy Carter and Gerald Ford.
- April 2001
- Members of the Voting Commission are appointed by the Governor, Lt. Governor, Speaker of the House and Secretary of State.
 - State certification testing of DRE systems begins.
- May 2001
- 21st Century Voting Commission holds its first meeting in Macon and reviews undervote data and selects 13 municipalities, evenly distributed throughout the state, as host cities for the pilot project.
- June 2001
- The Commission authorizes seven DRE vendors to participate in the pilot: Diversified Dynamics, Election Systems & Software, Global Election Systems, Hart InterCivic, Shoup Voting Solutions, Unilect and VoteHere.Net. (VoteHere is later dropped from the pilot when it is unable to complete national and state certification in time).
 - SB 213 is submitted to the U. S. Department of Justice for “pre-clearance,” as required under the Voting Rights Act.
 - Secretary of State enters into contract with the University of Georgia Survey Research Center to design and compute results of an extensive exit poll of DRE voters.
- August 2001
- Secretary of State secures discretionary funds from Governor Barnes to enable voter education efforts in each participating city, including hiring of a temporary voter education coordinator.
 - Secretary of State begins developing implementation plan for statewide system beginning in 2002. SOS staff also visits each participating city to update them on progress of pilot project.
- September 2001
- Vendors deliver demonstration units to participating cities to be used for voter education and staff training.
 - Recruiting begins of college students who will work as exit poll takers on election day. Nearly 150 students will participate.
 - SOS begins developing budget scenarios for acquisition and deployment of statewide system.
- October 2001
- Department of Justice “pre-clears” pilot project.
 - SOS negotiates lease agreements with each of six participating vendors supplying equipment in the project. Vendors are paid an equal amount per machine, and each is required to provide support and services in addition to equipment.

- All registered voters in each participating city receive mailing with information about the pilot project and specific instructions on how to use the DRE equipment deployed in their city.
 - Poll worker training sessions conducted.
 - Training of exit poll takers is conducted.
 - “Logic and Accuracy” testing completed on all DRE equipment.
- November 2001
- Municipal elections held in 13 pilot cities. Operations in all jurisdictions run smoothly and initial reports from both voters and election officials are positive.
 - Exit poll is conducted in the field. Nearly 2,200 interviews with voters are completed.
- December 2001
- Exit poll results presented. Results show that 94.5 % of voters who cast votes on one of the new electronic systems agreed with the statement, “Georgia should upgrade its voting system to a system like the one I used today.” Some 97.2 % of respondents said the equipment was “very easy” or “easy” to use and 95.9 % of those polled said they were “confident” or “very confident” that their vote was recorded correctly. Positive results were uniform among all age, regional and racial groupings.
 - Commission unanimously adopts recommendation to the Governor and General Assembly that the state select DRE equipment as its uniform system for precinct voting, and optical scan for mail-in absentee voting.
 - U. S. House of Representatives by a wide majority passes the Ney-Hoyer bill, which would provide several billion dollars to states for the upgrade of election equipment. A bipartisan compromise is announced in the U. S. Senate on its version of election reform legislation.
- January 2002
- U. S. Senate Majority Leader announces that bipartisan election reform legislation will be one of the first items on the calendar when the Senate reconvenes this month.
 - Senate Bill 414 is introduced in the General Assembly. The Bill provides for the authorization to purchase a uniform DRE voting system for all counties; established that electronic uniform system of voting would be in place and operational by July 2004; and established procedures for DRE use and ballot layout on DRE equipment.
 - The Governor recommends full funding for the uniform system purchase and rollout for the system by November 2002 and full funding for the Secretary of State’s Voter Education Plan.
- February 2002
- The Secretary of State’s office prepares and issues a Request for Proposal (RFP) regarding the elements and functions desired of a statewide uniform electronic voting system.
 - The Center for Election Systems at Kennesaw State University (KSU) is established and funding is provided.
- March 2002
- Senate Bill 414 passes nearly unanimously and is signed by the Governor.

- The General Assembly approves \$54 million in bond funding for the statewide uniform electronic system of voting and \$4.5 million in voter education funding.

- Nine vendors submit responses to the RFP.

- An eleven-member evaluation committee is assembled consisting of state and local election officials. All proposals are reviewed based on technical merit, overall deployment plan, customer support, and cost.

April 2002

- The evaluation committee gives a unanimous recommendation to the Secretary of State and the Georgia Technology Authority that Diebold Election Systems be selected as the statewide vendor.

May 2002

- Contract is signed between the State of Georgia and Diebold Election Systems.

- Deployment plan is developed which will ensure that all counties in Georgia will be using the new uniform system of voting during the November 2002 General Election.

- The Office of the Secretary of State conducts information sessions around the state to disseminate information to county election officials. Held in five regional locations, details are provided about the contents of the contract between Diebold and the State; delivery of equipment and storage requirements; upcoming training sessions; and KSU's Center for Election Systems.

- The State Elections Office begins sending a weekly report electronically to county election offices to keep the counties abreast of progress being made in the implementation plan of the uniform voting system.

June 2002

- Twelve Regional Voter Education Coordinators and one Statewide Voter Education Coordinator are hired by the State Elections Office.

- Equipment delivery is underway. Both TS and OS units are delivered, as well as servers containing the GEMS software system.

- KSU begins performing Acceptance testing of each piece of equipment that has been delivered to the counties. Equipment that fails testing is returned to the Diebold Warehouse for repair.

July 2002

- Diebold conducts county training on the voting system with a special focus on Election Day use. The two-part training is provided to the county election superintendent and at least one other member of their staff.

- Bi-weekly meetings between Secretary of State staff and Diebold staff begin.

August 2002

- Diebold assists Hall and Marion counties as they conduct their General Primary on the new electronic voting system. Diebold develops the election databases for the counties and conducts poll worker training.

- A demonstration voting unit is placed in every precinct in Georgia during the General Primary to introduce the equipment to the public.

- Statewide voter education days are conducted, including “Grocery Store Day” and “Home Improvement Day.”
- The Georgia Counts website is launched.
- Production begins on the poll worker and voter education videos, as well as the thirty-second Public Service Announcement.
- Voter Education Grant funds are made available to each county. Each county is encouraged to use the funds to hire at least one person to serve as that county’s voter education coordinator.

September 2002

- Weekly face-to-face meetings begin between the Office of the Secretary of State, Diebold, and KSU to discuss all aspects of deployment, testing, and training being conducted around the state.
- The Secretary of State’s office once again holds regional information sessions. The meetings focus on delivery of equipment, training options, opening and closing procedures, paperwork, and voter education efforts.
- Florida holds its Primary election. Fifteen counties operated electronic systems in their first major election, and thirteen of those counties saw relatively smooth deployments. Two large south Florida counties, however, experienced operational failures, including polls opening late and voters enduring long delays and uncertainty as to whether they would be able to vote. Georgia learns from this experience and increases amount of training made available to poll workers.

October 2002

- Diebold completes delivery of equipment to counties.
- Due to the deadlines for Logic and Accuracy Testing, it becomes obvious that counties need additional resources to continue training efforts. The State Elections office coordinates a loan package with Diebold so that each county would receive one additional voting unit, encoders, and a memory card to use for poll worker training and voter education.
- The Secretary of State’s Press Office releases Media Backgrounders.
- As KSU finishes Acceptance Testing around the state, staff is redistributed to provide additional poll worker training when requested by counties.
- Counties in need of additional assistance are identified, and KSU, Diebold and Secretary of State staff visit each county to provide training and support.
- Election database building is completed by Diebold for all 159 counties. Memory cards were produced, and Diebold techs and county staff installed the memory cards into the voting units. Logic and Accuracy testing is conducted. After testing is completed, the voting units are closed and sealed.
- The role of the Regional Voter Education Coordinators is expanded to provide greater assistance in the final weeks to county election officials. They assist with site checks, equipment dispersal, and poll worker training sessions.
- A communication plan for Election Day is developed by the Office of the Secretary of State. Secretary of State and Georgia Technology Authority staff

members will be located around the state on Election Day and are provided with two-way digital radios to use to ensure that communication is efficient.

November 2002

- Each county receives one county technician and one field rover for every thirty precincts from Diebold. The county technician focuses on the opening and closing processes, while the field rover visits each of the polling places, as well as assists with tabulating the results at the end of the election.

- The Office of the Secretary of State establishes a “War Room” in Atlanta that will serve as communication headquarters. Members of the Secretary of State’s Office, the Georgia Technology Authority, and Diebold staff the office on Election Day. Updates and general information are communicated by using two-way digital radios. Over 100 state employees are deployed around the state to monitor Election Day progress.

- The Atlanta Journal-Constitution places 18 reporters throughout the state to cover voter reaction to the new voting system. An on-line poll on the AJC website asks for voter feedback, which is overwhelmingly supportive of the change.

February 2003

- Survey results released by the University of Georgia’s Carl Vinson Institute of Government show Georgians’ confidence in the voting process increased significantly following the adoption of the state’s electronic voting platform. The study also indicates that 97 % of respondents reported that they had no difficulties using the new touch screen voting terminals.

The Certification and Testing Process

The adoption of any new technology brings with it questions about the accuracy, reliability, integrity and “roadworthiness” of the new system. Public confidence in the elections process is central to the health of our democratic institutions, making it essential that any new voting system be subjected to rigorous testing to assure its performance on election day.

The Diebold Accuvote TS touch screen voting terminals (and the optical scan ballot tabulators used to count absentee votes) have endured just such scrutiny – beginning with their design and manufacture all the way through delivery and deployment into each Georgia county.

Georgia election law requires that any voting system deployed in Georgia meet both national and state certification requirements, pass acceptance testing once deployed to a county and be subjected to “Logic and Accuracy” testing before being put into service on Election Day. Major components of this multi-tiered testing regimen are:

National Certification

National election equipment standards are established by NASED (the National Association of State Elections Directors) in cooperation with the Federal Elections Commission and require that any new system successfully complete testing by Independent Test Authorities (ITA’s). Separate labs test the hardware and software components of the new systems. The two testing facilities, Wyle Laboratories and Ciber, Inc. are located in Huntsville, Alabama and have extensive experience in NASA-related testing. Software is examined for reliability and hardware is subjected to a variety of “torture tests” including exposure to temperature extremes, electrical spikes and even being dropped on the floor.

State Certification

Following NASED certification units then must pass state certification tests. Dr. Britt Williams of Kennesaw State University’s (KSU) Computer Science department, who is a nationally recognized expert on election systems, serves as the state’s consultant and performs all testing. The state testing examines both hardware and software for accuracy and reliability, and mock elections are conducted on the equipment, witnessed by county election officials.

Diebold’s touch screen and optical scan (for absentee balloting) systems passed both levels of testing before being considered for acquisition in Georgia. Following the contract award, as units were manufactured and shipped into the state, an entire new series of tests were conducted on each individual voting unit.

Individual Unit Testing

Before leaving the factory, each touch screen terminal receives a diagnostic test. Upon arrival at Diebold’s central warehouse in Atlanta, each unit was put through a diagnostic sequence to test a variety of functions, including the card reader, serial port, printer, the internal clock and the calibration of the touch screen itself. These tests were audited by experts from KSU’s Center for Election Systems, who tested a representative sampling of the voting units. After shipment to each of Georgia’s 159 counties, county acceptance testing (which consists of the same types of diagnostic procedures) was performed by KSU staff on each voting terminal and the thousands of encoders (at least three per precinct) used to activate voter cards.

Georgia law requires that before an election, each of the 22,052 voting units also undergo “Logic and Accuracy” testing which examines system features, insures that votes that are cast are properly recorded, and assures that all candidates and questions for each ballot style in each precinct are properly loaded onto the system. Sample votes are cast on the equipment and these totals are verified. (Logic and Accuracy differs from the previous rounds of examination because the testing uses the actual memory card that will be used in

a specific precinct on election day). Voter card encoders and optical scan ballot tabulators are also tested at this time, and at least one memory card from each precinct is uploaded to the county server to ensure that the upload features necessary to compile and count the votes are working properly. At the conclusion of this testing phase, the units are put into election mode and checked to insure no votes have been recorded in any race by printing out a zero report. Touch screen terminals are then locked and sealed – and the numbered seal is not broken until they are placed into service on election day. In essence, each piece of voting equipment was tested four times prior to election day.

Georgia’s multi-tiered election equipment testing program, among the most rigorous in the nation, is designed to assure the highest possible level of system reliability on election day.

Voter Education Process

Georgia was the only state in the nation to adopt a single, statewide solution in 2002 for the upgrade of election equipment and to deploy it simultaneously in every county. A key benefit of Georgia’s election reform model is the ability, for the first time in history, to speak with one voice to every Georgia citizen about how to properly cast an accurate ballot.

Experience in other jurisdictions and in Georgia as well has shown that once voters become familiar with the new electronic touch screen terminals they embrace this system as far preferable to other balloting methods. In the 13 municipal pilot elections held in November 2001, nearly 2200 voters were polled after casting their ballots on electronic, or “DRE,” equipment. The survey, fielded and compiled by University of Georgia researchers, found that 94.5% of respondents agreed that Georgia should upgrade to a new voting system like the one they had just used. Importantly, these findings were consistent across all ethnic and age groups, with older voters even more enthusiastic about the benefits of the new electronic technology than their younger counterparts.

Key to the success of the municipal pilot election project was an aggressive voter education program designed to acquaint citizens with the new equipment before they arrived at their precinct to vote. As Georgia prepared to embark on the acquisition and deployment of a new voting system for every county before the November 5th 2002 General Election, Secretary of State Cathy Cox made clear to policymakers that the changeover could only succeed if coupled with an extensive, and multi-tiered, voter education campaign. In the supplemental FY 2002 and FY 2003 budgets approved by the General Assembly, and in addition to the bond money for equipment acquisition, approximately \$4.5 million in funding was provided to support the statewide deployment. A substantial portion of those dollars were dedicated to voter education and outreach efforts.

Launched soon after Georgia selected its equipment vendor in May 2002, the voter education campaign, entitled *Georgia Counts*, gained momentum throughout the summer. The program escalated further in the weeks remaining before the November 5th General Election. Involving both state and county resources, the public outreach program included several major components:

Regional Voter Education Coordinators

To kick-start the campaign, the Secretary of State’s office created 12 new voter education coordinator (VEC) positions (supervised by a new statewide manager of voter education). The VECs were assigned to the 12 service delivery regions of the state and were responsible for initiating outreach programs in their area and assisting county election officials in developing their own educational initiatives.

The overall goal for the Voter Education Coordinators was to “reach every Georgia voter,” and this goal was clearly seen through the variety of events that were scheduled. Since early summer each VEC was responsible for reaching out to organizations in their own regions and scheduling their own demonstrations. They conducted literally hundreds of equipment demonstration events – including appearances at civic clubs, shopping malls, fairs, senior citizen centers, transit stations, banks, grocery stores, large employers, colleges

and universities, hospitals, sports stadiums and other community gathering points. These sessions gave thousands of Georgians a hands-on opportunity to experience electronic voting by casting a sample ballot.

Several “Statewide Days” were organized, including Grocery Store Day, Home Improvement Day, Bank Day, and Hospital Day, where both regional and county VECs were located at appointed spots across the state on the same day. These Statewide Days were publicized by the Secretary of State’s press office, as well as through contacts with local media and organizations.

During the months of September and October, the regional VECs focused primarily on large groups (50 or more) in order to reach the maximum amount of voters. Demonstrations during the final two months tended to include annual conferences for EMCs, Farm Bureau regional meetings, NAACP rallies, and Chamber of Commerce Fall meetings.

The VEC responsibilities also expanded to assist with last minute preparations for the election during the final months. They spoke almost daily with county election officials and poll workers and communicated messages from the State Election office to the county offices.

County Voter Education Coordinators

In addition to the Regional VEC program, every Georgia county was awarded a grant of either \$4,000, \$7,000 or \$10,000 (based on size) earmarked to hire their own part-time voter educators to conduct community based programs. To enhance that effort, many counties supplemented those state funds with their own resources to hire additional staff and enlarge still further the footprint of voter outreach.

Brought on board beginning in August, the County VECs were provided with ideas and suggestions from the regional VECs, but were for the most part on their own. In the final months of the project, while the regional VECs focused on larger organizations, the county VECs reached out to smaller groups, such as church circles, garden clubs, school groups, and small chapters of local organizations.

General Primary Public Demonstration

The August 20th General Primary also presented an ideal opportunity to demonstrate the new voting terminals to Georgia voters. Many of Georgia’s nearly 3,000 precincts in the 157 counties that used their legacy voting systems for the Primary set up demonstration touch screen units, and voters were invited to try out the new equipment before leaving the polls. (Two Georgia counties – Hall and Marion – utilized the new touch screen units in their Primary elections and reported excellent system performance.) Thousands of Primary voters took advantage of that opportunity.

Print Materials and Direct Mail Program

To help carry the message to Georgians about the features of the new voting system, the Secretary of State’s office printed and distributed several million pieces of educational material. A four-color tri-fold brochure (printed in English, Spanish and several Asian languages) provided photographs and clear, step-by-step instructions for voting on the touch screen units, and a smaller Voting Instruction Card (also known as a Wallet Card) provided a condensed version of these same instructions.

In each precinct on Election Day voters encountered still more information. Large color posters with voting instructions were displayed at the polling place, and a smaller version was affixed to the privacy booth of each voting unit. In addition, when they arrived at the polls every voter was offered an instructional card with directions on how to cast their ballot electronically. Poll workers also wore special stickers encouraging voters to ask them for help if they have concerns about the voting process.

To assure that everyone was reached by the *Georgia Counts* educational message, beginning in mid-October every one of the state's approximately 3.8 million active registered voters received in the mail an instructional brochure with simple, step-by-step instructions for casting their ballot.

Television Campaign

Beginning Wednesday October 16th and continuing through Monday, November 3rd a paid schedule of 30-second spots was aired in all six major Georgia television markets and Chattanooga. The public service announcement, *Touch the Future*, acquainted voters with the security, simplicity and convenience of the new equipment and directed them to the **Georgia Counts** website or toll-free telephone line for more information. In the Atlanta TV market the spots reached some 98 % of the target audience. Many local television stations and cable operators aired the spot as an unpaid public service announcement as well.

Media Outreach

With 159 counties and millions of voters to reach, the Office of the Secretary of State realized the importance of utilizing the local print and television media outlets to help spread information about the new voting systems. The Secretary of State's press office regularly updated local media outlets on upcoming public demonstrations and created a variety of media backgrounders that detailed specifics of the project, including "Georgia's 2002 General Election At-A-Glance," "Glossary of Electronic Voting Terms," and "Who Does What in Georgia Elections?"

The Regional VECs were also encouraged to develop contacts with the local print media and cable access channels. These coordinators kept the newspapers and television stations apprised of upcoming events in their area, provided private demonstrations for their staff, and presented them with copies of the educational videos and media backgrounders. The VECs were oftentimes invited to be guests on radio and TV shows and were contacted when questions arose about the process, which helped facilitate the transferal of correct information about the project.

Educational Video Projects

Short of an in-person, hands-on demonstration there is no better way for voters to learn about the features of the new system than through video – which can depict the screens and prompts voters will encounter on election day. The Secretary of State's office contracted with Georgia Public Broadcasting to develop a number of video productions to help tell this story. A six-minute voter orientation video (with close captioning) was produced, along with a Spanish language version, a condensed, three-minute "looped" version which can be used for repeat showings, a 12 ½-minute training video for poll managers and poll workers, and the 30-second *PSA*. Thousands of duplicates of these videos were distributed by VECs, county election offices and community service organizations.

Georgia Counts Website

The Georgia Counts website, located at www.georgiacounts.com, was an important resource for voter education. Web visitors could try an online demo of electronic voting, access a schedule of voter education events in their area, view streaming educational videos and get answers to many of the most commonly asked questions about the new system.

Toll-Free Voter Information Line

For voters who did not have web access or who preferred to obtain answers to questions by phone, a toll-free Georgia Counts information line was available. Citizens could learn about voting system procedures, security, secrecy, and features that benefit visually impaired and disabled voters. The answer line also included information about the 2002 constitutional amendments and referendum questions and Georgia's voter ID requirement.

Partnership With Community Service Organizations

To make certain that every segment of the voting population was reached, the Office of Secretary of State entered into partnerships with a number of community service organizations. These groups received resources, demonstration units, printed and video materials and logistical support. Participants in this program included AARP, League of Women Voters, Coalition for the People's Agenda, Georgia Federation for the Blind, NAACP and the Hispanic Chamber of Commerce.

The County Election Preparation Process

One of the keys to success with the overhaul of Georgia's election system was sound preparation by counties. In the months prior to the election, steps were taken to ensure that the county election officials and their staff would be prepared and feel comfortable with the adoption of the new voting equipment and procedures.

Center for Election Systems

To support the Secretary of State's effort to provide a uniform electronic voting system, The Center for Election Systems was established at Kennesaw State University. Building on its stated core functions of training, education, and technical support, the Center provided special services to Georgia election officials and poll workers to assist with the transition to the new system.

Early on, the Center audited Diebold's warehouse operations to ensure that the proper tests on equipment were conducted prior to the shipment of the election equipment to counties. While continuing the audit process, KSU staff members began traveling the state to perform acceptance testing on the equipment that had been delivered. KSU staff members touched each piece of equipment that was delivered, and if a component failed the acceptance test, the voting unit was returned to the warehouse for repair or replacement.

As the testing process neared completion, several KSU staff members were reassigned to fulfill the training needs of counties around the state. The Center offered two primary training sessions. The Poll Manager training session focused on Election Day processes, including opening, operating, and closing the polls. Issues such as setting up the polling place to facilitate an efficient flow of voters, learning how to successfully handle problems that might arise on Election Day, and knowing where to obtain additional help and support were discussed.

The Poll Worker Training Session focused on more basic election day procedures. Poll workers were provided with the opportunity to spend more hands' on time with the voting units, ask questions about the voting equipment and its functions, and learn about what to expect on Election Day.

Finally, the Center for Election Systems provided a toll-free telephone number to the counties to use whenever problems arose. The number was used for both basic and technical questions, and the Help Desk was fully staffed on Election Day in case any problems arose.

Election Official Training

As part of the state contract, Diebold was required to provide five days of extensive training on the new voting system. While the initial plan called for county officials to attend five consecutive days of training, it was ultimately determined that the training should be divided into two parts. Each county would attend a two-day training course prior to the November elections, while the remaining three days of training would be conducted following the 2002 elections.

The two-day training course focused on the information county election officials would need to execute the 2002 election, which included creating memory cards, operating the voting equipment, executing logic and accuracy tests, tallying votes, conducting public demonstrations, and opening and closing the polls. While the vendor provided all of the required technical elements for the county to execute the election, which included a complete election database, it was necessary for the counties to receive basic training on how the technical elements would function on Election Day.

The three-day training course to be conducted in 2003 will educate county election officials on the development of election databases, which includes defining districts, precincts, and races, assigning ballot styles to precincts, creating ballots, sending ballot print files to printers. This information along with lessons learned from the previous two-day training course will provide counties with a working knowledge of the voting system that will serve them for future elections.

Poll Worker Training

Even with new technology and new procedures, one thing has not changed about Georgia elections: those who had the most direct impact on achieving a smooth, successful election day were the poll managers and workers who staffed Georgia's 2925 precincts on November 5th.

With thousands of precincts in 159 counties in the largest state east of the Mississippi River, the task of getting thousands of county-hired poll workers comfortable with new voting procedures was monumental. It began early summer 2002 with the training of county election superintendents and their fulltime staff. As mentioned, the superintendent and at least one other top staff member received two days of intensive training on the new equipment, provided by Diebold Election Systems. These sessions provided a basic orientation to setting up and conducting an election and compiling the votes on election night.

Beginning in September, Diebold trainers began to fan out across Georgia to conduct hands-on training sessions for poll workers in every one of Georgia's 159 counties. As part of its contract with the state, Diebold committed to train at least two workers per precinct – typically a poll manager and an assistant. These sessions, which lasted from 2 ½ to 4 ½ hours, provided an in-depth orientation to equipment operation and procedures. A 12 ½ minute training videotape, produced and distributed by the Office of Secretary of State, also offered a basic overview of set up, election operations and shut down of the equipment. More than 3000 tapes were distributed statewide.

In addition to the Diebold and KSU-provided training on touch screen operations, all counties are required by law to train poll workers on the broader scope of duties, including voter ID requirements, checking in and accounting for voters, provisional voting procedures and other procedures, as well as assuring that every poll worker was trained on the touch screen.

Grant Money for Further Training

To help counties provide incentives to their poll workers to attend training the Secretary of State's office also created a training grant program totaling \$300,000 – about \$100 per precinct to be used to compensate poll officials for their time in training. Secretary of State staffers regularly audited training sessions to measure the quality of instruction and assess where there may be a need for more follow-up class work. The state also provided to all 159 counties a special training kit consisting of a memory card, encoders and voter access cards (140 counties also received an extra touch screen terminal) to enable each county to conduct additional training and mock elections on its own.

Weekly Updates

Due to the time constraints that are attached to achieving success in a six-month project of this magnitude, the State Elections division emailed and faxed weekly updates to each county's election office. Beginning in May 2002, updates focused on issues such as delivery of equipment, storage requirements, ballot preparation,

and voter education. The weekly report was quickly recognized to be one of the most efficient communication efforts between the State Elections division and counties and was eagerly anticipated by the county election officials each week.

As November 5th approached, the weekly update slowly transformed into a daily update and enabled the State Elections Office to quickly disseminate time-sensitive information to counties across the state.

Regional Road Shows

While email and faxed communications are important, the Division also recognized that face-to-face sessions with county elections staff were also needed. A series of informational workshops were scheduled around the state, which provided an opportunity for county and state election officials to discuss the issues they faced in the coming months and weeks.

The first Regional Road Show was conducted in May 2002, and five informational sessions were held around the state. Designed to introduce county officials to the new equipment that would be used, as well as to the team that would be coordinating the project, several major items were discussed, including the contents of the contract between Diebold and the State; delivery of equipment and storage requirements; upcoming training sessions; and the details of KSU's Center for Election Systems and what role it would play in the election process.

Two months prior to the Election, the second Regional Road Show took place. With a greater focus on the basics of the upcoming election, officials from the Secretary of State's office provided information about the equipment delivery schedule; opening and closing procedures; how to organize the new paperwork; and what to expect on Election Day. The two counties that used the new voting units during their Primary Election gave presentations in an effort to better prepare the county officials for the work that was ahead of them, as well as provide words of encouragement.

Fulfilling Supply Needs

Last minute and unexpected supply needs were a major focus during the final months of the election reform efforts. Because of the tremendous importance of the project, it was not uncommon for the state to provide additional help to ensure that counties were prepared for Election Day. For counties that had a limited equipment supply, the State Elections division provided extra equipment to serve as demonstration and poll worker training units. The State also purchased additional encoders for counties with extremely large voting precincts.

As a precautionary step, the State assembled poll worker assistance kits. These kits contained extra batteries for the encoders, screwdrivers that could be used to open the encoders, and nightlights that could be used by poll workers to verify that electrical outlets and connections in the precincts were functioning properly.

Election Day

“The War Room”

Communication was a key factor in the success of Election Day, and the center of communication on Election Day was an office in the State Elections suite. Staff from the Office of the Secretary of State, the Georgia Technology Authority, and Diebold Election Systems set up computers, phone lines, radios, and a large map of the State of Georgia to keep track of the day’s progress.

Throughout the day, the Secretary of State and GTA staff “rovers” contacted the War Room to ask questions, report the progress of their counties, and notify the Atlanta office of their movements, which were being tracked on the large map displayed in the room.

As the day drew to a close, the War Room began tracking the closing of the polls and computation results. Shortly after 7:00 p.m., election returns began arriving via computer and fax machine. As questions arose, the War Room staff radioed the appropriate rover and the situation was immediately addressed.

The Communication Plan

A month prior to the Election, the Office of the Secretary of State created a communication plan for Election Day that involved the Regional Voter Education Coordinators, Secretary of State Investigators, Secretary of State staff members from a variety of divisions, and Georgia Technology Authority staff members. Over 100 Secretary of State and Georgia Technology Authority (GTA) staff members were assigned to locations across the state with two-way digital radios. Every time a rover moved from one county to another, the rover radioed in to Atlanta with a progress report.

After identifying the counties with the greatest needs prior to Election Day, one rover was assigned to each of the selected counties. These staff members began the day at a polling place in one of their assigned counties and observed the opening of the polls. When the polling place was open and voters were voting, the staff members contacted the War Room to alert the office of their progress. After visiting the county election official’s office, the staff member would visit another county in their region. In between the opening and closing processes, each rover was assigned approximately five counties to visit.

If the Atlanta office was notified of a problem in a polling place, the War Room staff was instructed to contact the rover assigned to that particular county.

Diebold Technicians

Prior to Election Day, each Diebold technician served the counties in a variety of capacities. Technicians transported completed databases from Diebold’s warehouse facility in Atlanta to county election offices around the state and would assist the county in loading the database to the county’s GEMS server. Once loaded, the technicians would assist the county in the preparation of the memory cards necessary to operate the touch screen and optical scan voting units. Technicians also took part all the necessary Logic and Accuracy tests on the voting equipment prior to the election. Finally, technicians assisted the counties in programming the various encoders each precinct would need to prepare voting cards for the public on Election Day.

On Election Day, the technicians were assigned specific duties. First, technicians assisted with the opening procedures in various precincts within their assigned county. Throughout the remainder of the day, Diebold staff roamed each county visiting various precincts to make sure the election processes were progressing smoothly. At the end of the day, technicians provided assistance with poll closing procedures as needed. When memory cards were delivered to county election offices, Diebold technicians were on-site to help

election officials execute the functions in GEMS to tally the votes and produce tally reports to share with the media and the public at large.

During the days following the election, technicians assisted county election officials in creating backup copies of the election database, as well as helping prepare the certification reports from GEMS that were used to certify the county's election results.

The Returns

At each county elections office, a Diebold Election Systems county technician compiled the results received from all precincts in the county by uploading each memory card. Absentee ballots were fed into an optical scan ballot reader. Periodically during election night, the Diebold tech created an export file of the results compiled so far, and transmitted those totals via modem to the Secretary of State's information technology department. After a quick review by IT staff those results were then immediately displayed on the SOS website.

As before, the results reported on election night were unofficial. Official totals were not available until counties completed their certification, submitted their results to the state, and the Secretary of State in turn completed a state certification process. New this year was provisional voting, which is a procedure in which citizens who believe they are registered but whose registration cannot be confirmed on Election Day are able to cast a "provisional ballot" that is set aside for up to two days while the voter registrar determines whether the vote was valid. Because of this extra two-day requirement, county certification could not be completed until the provisional window closed.

Prior to the Election, many speculated on how quickly election results would be tabulated due to the change to an electronic voting system. Every time the Secretary of State's office received a question about return time, the response always focused on the importance of accuracy versus speed. With that background, when the SOS election night returns were for the first time in memory-released more quickly than the results compiled by the Associated Press, it was a pleasant surprise to all.