



Report of The 21st Century Voting Commission

**Submitted to Governor Roy E. Barnes and
Members of the Georgia General Assembly
December 2001**

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The Georgia General Assembly

Table of Contents

	<u>Page</u>
Members of the Commission	3
Executive Summary	5
Definitions and Glossary	7
Chronology of Important Events	9
Background and Mission of the Commission	14
Review of Election Equipment Performance	18
Experience of Other Jurisdictions	23
The Electronic Voting Pilot Project – Vendors and Cities	25
Community Voter Education Efforts	28
Election Day Experience	31
Exit Polling Results	33
Recommendations of the Commission	38

Appendix: Letters From Selected Participating Pilot Cities

21st Century Voting Commission Members

Appointees of the Georgia House of Representatives

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Calhoun, Georgia

Representative Mark Burkhalter (R)
Alpharetta, Georgia

Appointees of the Georgia Senate

Senator Jack Hill (D)
Reidsville, Georgia

Senator Billy Ray (R)
Lawrenceville, Georgia

Appointees of the Secretary of State

Lynn Bailey (N)
Election Supervisor, Richmond County
Augusta, Georgia

Kathy Rogers (N)
Election Supervisor, Chatham County
Savannah, Georgia

Linda Latimore (N)
Election Supervisor, DeKalb County
Decatur, Georgia

Gloria Champion (N)
Election Supervisor, Fulton County
Atlanta, Georgia

Michael F. Bracewell (N)
Judge of Probate Court, Morgan County
Madison, Georgia

Kenneth Van Horn (R)
Judge of Probate Court, Chattahoochee County
Cusseta, Georgia

Representative Buddy DeLoach (I)
Hinesville, Georgia

Justine Boyd (N)
Clerk, County Commission of Fulton County
Atlanta, Georgia

Appointees of the Governor

Erica Brooks (D)
Atlanta, Georgia

Molly Dye (R)
Atlanta, Georgia

Appointee of the Libertarian Party of Georgia

Montague (Cosmo) Boyd (L)
Atlanta, Georgia

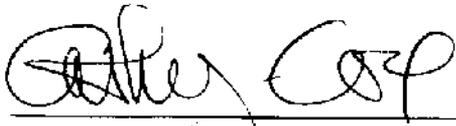
Statutory Members of the Commission

Secretary of State Cathy Cox (D)
Atlanta, Georgia

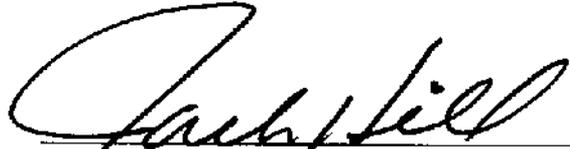
Linda Beazley (N)
Director, Elections Division, Office of Secretary of State
Atlanta, Georgia

Larry J. Singer (N)
Chief Information Officer and Executive Director
(Designee: Robert Woodruff)
Georgia Technology Authority
Atlanta, Georgia

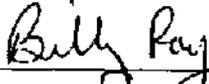
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D: Democrat
R: Republican
I: Independent
L: Libertarian



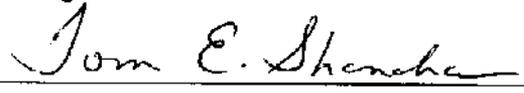
Cathy Cox
Secretary of State



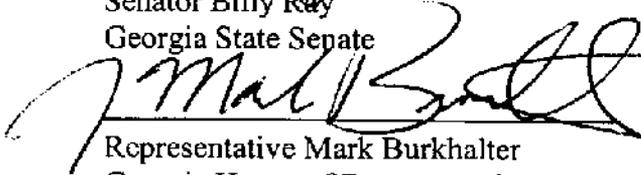
Senator Jack Hill
Georgia State Senate



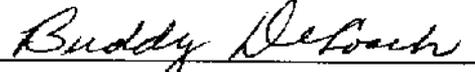
Senator Billy Ray
Georgia State Senate



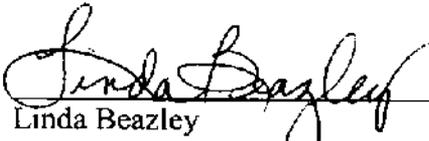
Representative Tom Shanahan •
Georgia House of Representatives



Representative Mark Burkhalter
Georgia House of Representatives



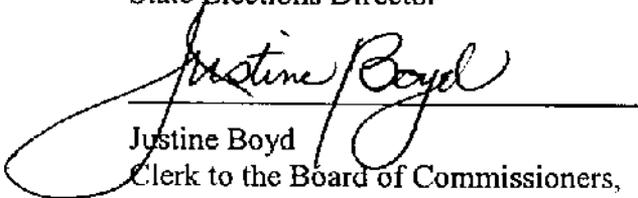
Representative Buddy DeLoach
Georgia House of Representatives



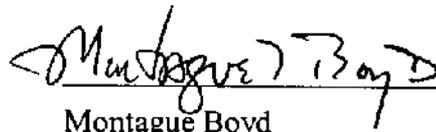
Linda Beazley
State Elections Director



Lynn Bailey
Director, Richmond County Elections



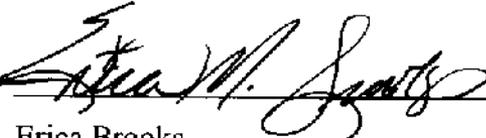
Justine Boyd
Clerk to the Board of Commissioners,
Fulton County



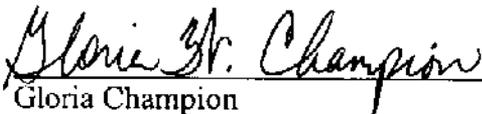
Montague Boyd
Libertarian Party Representative



Judge Mike Braccwell
Director, Morgan County Elections



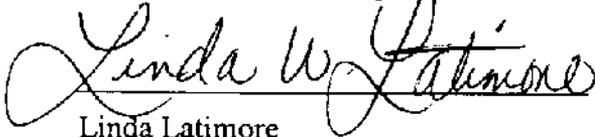
Erica Brooks
Appointed by Governor Roy E. Barnes



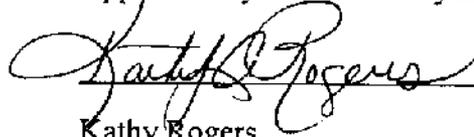
Gloria Champion
Director, Fulton County Elections



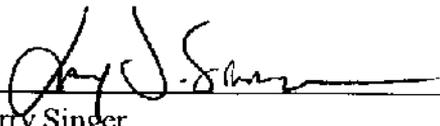
Molly Dye
Appointed by Governor Roy E. Barnes



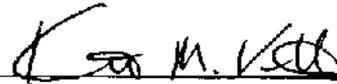
Linda Latimore
Director, DeKalb County Elections



Kathy Rogers
Director, Chatham County Elections



Larry Singer
Director, Georgia Technology Authority



Judge Kenneth Van Horn
Director, Chattahoochee County
Elections

Executive Summary

SB 213, enacted by the Georgia General Assembly and signed into law by Governor Roy Barnes April 18, 2001, established the 21st Century Voting Commission to oversee a pilot project to test direct record electronic (DRE) voting equipment, to advise the Secretary of State on the choice of voting equipment to be used statewide in all counties pursuant to Code Section 21-2-300, and to report its findings to the Governor and the General Assembly by December 31, 2001. The statute further specified that the Commission would have equal partisan representation and should hold at least one meeting each in North, Middle and South Georgia.

During five public hearings and additional sub-committee work sessions, the Commission studied data on voting error rates, viewed presentations from manufacturers of electronic voting equipment, heard testimony from election officials from Georgia and other states and received comments from the general public on voting issues. Several Commission members also traveled to other states to personally observe elections in which DRE voting equipment was used.

As Georgia moves to a modern, uniform system of voting in all 159 counties by 2004, as required by SB 213 (subject to state funding), the pilot test of six separate DRE systems in 13 Georgia municipalities was designed to provide essential, “real world” experience with this new voting technology. With the enthusiastic involvement of election officials and widespread community support in each participating city, it is the Commission’s view that the pilot project worked exceptionally smoothly, and validated the feasibility of deploying DRE equipment statewide. The response received from election officials, voters and community and civic leaders was extremely positive, and for the Commission strongly endorsed the feasibility and desirability of deploying DRE technology as Georgia’s uniform voting system.

Exit polling data, drawn from interviews with nearly 2,200 voters who used the electronic equipment showed extremely high support for DRE technology. Some 94.5 % of respondents agreed with the statement, “*Georgia should upgrade its voting system to a system like the one I used today.*” Importantly, this very favorable public response was consistent across all geographic regions, races and age levels.

When the Commission began its work in April no manufacturer of DRE equipment had yet obtained certification of their system in Georgia. No county or municipality in our state had ever conducted an election with this equipment. Many of the members of the Commission had never actually seen a DRE unit in operation. What transpired over the following nine months was an intensive learning experience for Commission members, helped greatly by the enthusiastic participation of six DRE equipment manufacturers, (each of whom completed state certification requirements) and the commitment and energy of local election officials in every region of Georgia.

The successful completion of the pilot project and the other evidence reviewed by the Commission leads us to several conclusions about DRE voting equipment. There are

a number of DRE systems currently available that offer convenient and intuitive voter interfaces; have features that prohibit duplicate, or overvotes; provide feedback to alert voters of undervotes and provide users the opportunity to correct their ballot; have strong security components to assure that votes cannot be lost or cast without authorization; have the capability to print, if required, a written record of each ballot cast; have the flexibility to store and present thousands of different ballot variations or “styles;” have the capability to be fully accessible to blind voters and those with other disabilities and allow these voters to cast their ballot independently and without assistance; and have the ability to compute final results and generate a variety of election reports very quickly.

Based on extensive analysis and review of data, public testimony and observations gleaned from the pilot project, we, the members of the 21st Century Voting Commission make to the Governor and members of the General Assembly the following recommendations:

- 1) Georgia’s uniform election platform should be a DRE voting system used for election day in-precinct voting, for in-person absentee voting, and, if authorized by new legislation, for in-person “advance” or “early” voting. The DRE system selected should have the capability to prevent duplicate, or overvotes, provide voters with a “summary screen” to warn voters of potential undervotes or selection errors, and include a process for voters to correct errors or omissions before a final vote is cast. The system should include on-board battery back-up in case of power failure, have the capability to produce an independent and paper audit trail of every ballot cast and should permit a visually impaired voter, and others with disabilities, to cast a ballot independently and without assistance.
- 2) For absentee voting by mail, the uniform system to be employed should be an optical scan system. The optical scan system should integrate seamlessly with the DRE components of the system for ballot preparation and tabulation.
- 3) The uniform election system should be controlled by an Election Management System or software program that will allow election officials to easily design both DRE and optical scan ballot formats simultaneously, that will integrate all results into a single vote tallying report and that will easily interface with existing and future voter registration systems.
- 4) The state should seek to maximize the benefits of statewide negotiating and purchasing capacity by securing a statewide software license, as well as favorable pricing for technical support, maintenance and additional or replacement equipment that is made available for the benefit of local governments.

With the passage of SB 213, the successful completion of the nation’s largest ever test of new voting technology, and a broad based commitment by state and local policymakers who are committed to election reform, Georgia is poised to take a dramatic step forward in improving the accuracy and convenience of its elections. We strongly support the acquisition and deployment of a uniform DRE system to insure that our state seizes this historic opportunity.

Definitions and Glossary

Undervote: The difference between the number of ballots cast and the number of votes recorded in an individual race. Undervotes may be created when a voter deliberately chooses not to vote in a race, when a voter attempts to make a choice but makes an error that causes the vote not to be read, when an elector chooses more than one candidate in a single race, or when a voter makes a proper and valid choice but, because of mechanical or system failure, it is not read by the counting equipment.

Undercount: The total of all undervotes recorded in a race.

Overvote: The inadvertent selection by a voter of more than one candidate in a single race. Overvotes are a subset of the total number of undervotes. Most counties do not report overvotes as a separate category within the total undercount of unrecorded votes.

Ballot Style: The candidates and choices which are associated with an individual voter at a specific address. Including all the candidates running at the county, state and federal level, a typical election in Georgia requires thousands of ballot styles.

DRE: Direct Record Electronic, the term used to describe voting equipment, similar to an automatic teller machine (ATM), in which choices are made through a fully electronic interface – typically by touching a computer screen or pushing a button adjacent to a choice displayed on a screen. DREs may operate as stand alone units or may be linked to one another within a precinct, but they do NOT record or transmit votes over the Internet.

Election Management System: A software program that enables election officials to design ballots, prepare reports and coordinate the operations of the voting equipment with the voter registration system.

Equipment Certification: Laboratory evaluation of election equipment that may be performed at the national or state level. During the certification process equipment is scrutinized to verify its accuracy, reliability and security features. Georgia law requires that any election equipment placed in service in the state pass both national (FEC/NASED) and state certification (performed at Kennesaw State University).

FEC: Federal Election Commission, the federal agency responsible for a wide range of election-related matters. The FEC sets standards for the accuracy and functionality of voting equipment.

ITA: Independent Testing Agency, a laboratory approved by NASED to conduct intensive testing of election equipment, evaluating its accuracy, functionality, reliability and maintainability. Tests performed by an ITA may take several months to complete.

Lever Machine: A mechanical voting unit, not manufactured for decades but still in use in 73 Georgia counties, in which voters make their selections by pushing a lever adjacent to their chosen candidate's name; called "voting machines" in the Election Code of Georgia.

Logic and Accuracy Test: A test performed on voting equipment before its use in an election to verify it is working accurately and properly.

NASED: National Association of State Election Directors, responsible for administering and applying the standards for voting equipment accuracy and functionality set by the Federal Elections Commission.

Ney-Hoyer Bill: Legislation passed by the U. S. House of Representatives in December 2001 to encourage the modernization and upgrade of election systems nationwide. The Ney-Hoyer bill would make several billion dollars available to the states over a three-

year period to help fund the acquisition of new equipment. Similar legislation is currently pending in the U. S. Senate.

Optical Scan or Optiscan: A voting system in which choices are made by using a pencil or marker to fill in a circle adjacent to a ballot choice, or by completing an arrow adjacent to a choice. Ballots may be counted by scanning equipment located at each precinct, or at a single central counting location in each county.

Punch Card: A voting system in which electors use a stylus to punch a hole in a ballot card to make their electoral choice; that card is then read by a computer.

RFP: Request For Proposal, a formal notification to potential vendors and suppliers of the intent to acquire equipment or services.

SB 213: Senate Bill 213, legislation enacted by the 2001 General Assembly and signed by Governor Barnes, that, among other important provisions, mandates that every Georgia county adopt a uniform election system by July 2004, providing that the state makes funds available to purchase such equipment.

Chronology of Important Events

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.
- Commission member and SOS staffer visit Oakland, California to observe the city's first election using DRE equipment.

May 2001

- 21st Century Voting Commission holds first meeting, in Macon.

- Commission reviews undervote data, hears report on Oakland election and selects 13 municipalities, evenly distributed throughout the state, as host cities for the pilot project.

June 2001

- Commission holds second meeting in Atlanta. Members review procedures for testing and certification of equipment and hear presentations from representatives of equipment manufacturers. 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).
- The Commission also selects pairings to match participating vendors and cities.
- 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.
- On June 28th Commission holds third meeting, in Rome. Members hear presentations from election officials from California and North Carolina who have experience acquiring and using DRE systems.

August 2001

- Equipment certifications for six vendors completed.
- 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.
- Several Commission members visit Ohio and South Carolina to observe elections using DRE equipment.
- 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.
- Candidate qualifying for municipal elections occurs.

- Several Commission members visit Florida to observe DRE election.
- 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.
- Funds disbursed to cities for voter education coordinators.
- Extensive schedule of education and equipment demonstration begins in each participating city.
- 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.
- University of Georgia Survey Research Center begins computation of exit poll results.
- SOS staff conducts debriefing interviews with each participating election official. Officials also complete a survey of their observations and findings.

December 2001

- Final Commission meeting of the year held in Savannah. Participating municipal election officials testify on their experiences with the DRE project, and all endorse Georgia adopting DRE technology statewide.

- 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.

Background and Mission of the Commission

The unprecedented events of the 2000 presidential election raised public awareness of a nationwide problem that was not new, but that had not previously received sufficient attention. Most equipment used to cast and count votes is antiquated. Many systems currently in operation have unacceptably high error rates, and some appear to be extraordinarily prone to voter error or incomplete results computation. Error rates also vary widely from county to county, and even from precinct to precinct within counties. The advances in technology that have positively transformed so many aspects of our commercial life have not, for the most part, been applied to the business of elections. Too many voters in too many communities cannot be assured that their electoral choice will be properly computed when votes are counted. In its 2001 session, the Georgia General Assembly recognized the need for electoral reform and, with its passage of Senate Bill 213, put Georgia at the very forefront of national efforts to improve the management of elections.

The 2000 Election: A Wake-Up Call For Reform

A careful analysis of the 2000 general election results reveals that, unfortunately, the existence of a substantial undercount found across the nation was true for Georgia as well. The election resulted in 93,991 Georgia ballots, or 3.5%, not registering a vote for President of the United States, a rate that compared unfavorably with the national undervote average of 1.9% and the Florida average of 2.9%. In fact, the Georgia presidential undervote rate was one of the highest in the nation. The equipment utilized for gathering votes is varied, inconsistent, and, in many cases, outdated. Consider the four systems available to Georgia voters:

- (1) Paper ballots in 2 counties
- (2) Punch Card or "Vote Recorder" in 17 counties
- (3) Lever Machine or "Vote Machine" in 73 counties
- (4) Opti-scan or "Optical Scan" in 67 counties

Media coverage of the 2000 presidential election led some to believe that the problem of inaccurate voting systems begins and ends with punch cards and "hanging" or "dimpled chads." Georgia data, however, reveals that error rates in fact vary widely depending on equipment type and even among counties using the same equipment. (A report issued by Secretary of State Cox in January 2001, *The 2000 Election: A Wake-Up Call for Reform and Change*, provides considerable detail about this phenomenon.) Optical scan is the most modern of the four systems now used in Georgia. While some optical scan counties demonstrate good accuracy rates, it is also true that some of the highest presidential undervote rates in the state were found in counties using optical scan equipment. By way of example, in one optical scan county studied, four precincts showed presidential undervote rates in excess of 10%, and one precinct had a rate of

21.8%. Statewide, some 38,195 presidential undervotes were recorded from counties that use optical scan equipment.

Having four different voting equipment platforms in use (and with significant operational differences even within those platforms) creates other problems as well. It is nearly impossible to conduct effective statewide voter education, to help make sure voters understand how to properly use the equipment and cast a valid ballot. Likewise, local election officials offer literally 159 different approaches to training poll managers and poll workers on how to prepare for and conduct an election.

Uncounted votes and antiquated and disparate systems create an environment where citizens may have cause to wonder if their electoral choice was, in fact, counted. Because we recognize that the governance of our state and nation relies on the will of the people, fairly counted and accurately expressed, we believe every reasonable effort must be made to insure that every citizen has the opportunity to cast a valid ballot. A significant commitment to modernize and upgrade equipment, and to educate voters and poll workers on how to properly use it, is needed to insure that public confidence in this most basic right of citizenship is not further eroded.

In Pursuit of Better Election Processes

In light of the well-documented deficiencies of the Georgia election system, Governor Barnes, Secretary of State Cathy Cox and legislative leaders initiated a bi-partisan reform package in the 2001 General Assembly with the adoption of Senate Bill 213. Provisions of the legislation established the policy and the framework for Georgia to move very aggressively toward identifying and deploying essential changes in the election system. Chief among these changes was the policy directive that, subject to funding, "...the equipment used for casting and counting votes in the county, state and federal elections shall, by the July, 2004, primary election and afterwards, be the same in each county in this state and shall be provided to each county by the state, as determined by the Secretary of State" (O.C.G.A. Sec. 21-2-300 (a)). With adoption of this provision, Georgia became the first state in the nation to set a deadline for the installation of a uniform voting system.

Senate Bill 213 also provided authorization for the state to conduct a pilot project to test and evaluate the use of electronic voting systems during the 2001 municipal elections. The statutory mission of the Commission is to oversee the pilot project and to offer recommendations to the General Assembly and the Governor about the best solution for a uniform election system. Based upon the recommendation of Governor Barnes, \$200,000 was appropriated in the FY 2001 Amended Budget to support the Commission and to conduct the electronic equipment pilot project.

In crafting SB 213 legislators set some clear parameters for the composition and work of the Commission. The Commission was established to be multi-partisan and broadly representative of the political diversity of Georgia. Four members are Democrats, four are Republicans, eight are Non-Partisan, one is an Independent and one

represents the Libertarian Party of Georgia. Within this group the Commission benefits from the expertise of six local election officials and the director of the state elections division. Importantly, it also includes a strong legislative voice and includes five members of the Georgia General Assembly – three from the House and two from the Senate.

A Mandate For Reform

In the aftermath of the Florida recount, national public opinion surveys consistently found very strong support for election reform and widespread concern about the accuracy of election results. More than two out of three respondents favored a “complete overhaul” or “major reforms” of electoral processes. More than a few pundits, however, predicted that public interest in election reform would wane and the problems that surfaced in Florida would soon be forgotten.

Yet, 12 months later the public’s demand for modernized systems has not lessened. In fact, it may have increased. In a new poll conducted by the University of Georgia’s Carl Vinson Institute of Government in November 2001 (designed and fielded independently of this Commission and the Secretary of State’s office), 63 % of Georgians said that the problems experienced in the 2000 presidential election led to a decline in the public’s faith in democracy. **A full year after the Florida recount began some 69 % of those polled in Georgia said they support increasing state spending to modernize election equipment**, eight out of ten said they approved of the legislation mandating a uniform voting system, and some 79 % of respondents said that “*developing a statewide uniform electronic voting system will improve the accuracy of vote counting.*” Clearly, substantial majorities of our citizens recognize that improvements can and should be made to our voting technology, and they are looking to their elected representatives and election officials for decisive action.

Mission of the Commission

SB 213 established that “*The commission shall coordinate and oversee the pilot project authorized by this Code section...The commission shall make a report to the Governor and the General Assembly by December 31, 2001, on the results of the pilot project and shall further advise the Secretary of State on the choice of voting equipment to be used state wide in all counties pursuant to Code Section 21-2-300.*”

Beginning with its first meeting in May, the Commission agreed on an ambitious agenda of data analysis, public comment, expert testimony and pilot project oversight. The Commission’s role was focused on overall policy questions, with execution of operational details left to the Secretary of State’s staff. The Commission is not tasked with preparing a Request For Proposal, selecting an equipment vendor, preparing budget requests or negotiating contracts. Rather, the Commission’s charge was to oversee the

execution of the pilot project and recommend to the Secretary of State, the Governor and the General Assembly the election equipment platform that will best suit the needs of Georgia citizens for years to come.

Review of Election Equipment Performance

At its first meeting in May the Commission began its work by studying data gathered from Georgia and other states on the incidence of undervotes and overvotes by equipment type and by jurisdiction. The Commission also reviewed the status of Georgia election equipment deployments.

The equipment utilized for gathering votes is varied, inconsistent, and, in many cases, outdated. As noted above there are four systems available to Georgia voters:

- (1) Paper ballots in 2 counties, with 5,394 voters.
- (2) Punch Card or "Vote Recorder" in 17 counties with nearly 1.2 million registered voters. Punch card equipment was invented in 1890 and first introduced in 1964.
- (3) Lever Machine or "Voting Machine" in 73 counties with nearly 650,000 registered voters. This equipment invented in 1892, put into service in the early 1930's and production of it ceased in the early 1970's.
- (4) Opti-scan or "Optical Scan" in 67 counties with just over 2 million registered voters. First introduced in 1986, the two variations are "fill in oval" and "connect the arrows"; votes are tallied either with a "central counter" or "precinct counter."

Much of the information reviewed by the Commission concerning voting equipment error rates came from research performed by the Secretary of State's office of undervotes in the 2000 presidential race. (The Commission also reviewed DRE undervote performance data from other states.) The Georgia analyses examined both overall performance by county, and looked more specifically at variations that occur from precinct to precinct. There are some clear conclusions that can be drawn from this data:

- There are exceedingly large variations in undervote rates between counties, and even among counties that employ the same voting technology. In general, punch card counties have the highest undervote rates, followed by lever machines and then optical scan systems.
- Although optical scan systems, the "newest" technology used in Georgia, offer satisfactory performance in some counties, in many other locations optical scan undervote rates are extremely high – well above the averages for more antiquated systems. In fact, 21 counties that use optical scan technology had undervote rates of five percent or higher, including three counties that recorded rates of 9, 10 and 15 percent respectively. As previously noted, a total of more than 38,000 presidential undervotes were recorded from counties that use optical scan equipment. And the mean average (the average of all the

county percentages) of optical scan county undervotes is nearly identical to the now disparaged punch card systems.

- While complete data is not available, the numbers suggest that overvotes, or duplicate votes (where the voter accidentally makes more than one choice in a single contest, or perhaps where the machine improperly reads a duplicate vote that was not in fact made) represent a very substantial majority of the variance between ballots cast and votes recorded. Some observers suggest that undervotes in the presidential race simply reflect the conscious decision of voters to skip that race and make other choices later down the ballot. The data strongly suggests otherwise. In the 13 Georgia counties that compute duplicate votes (or overvotes) as a separate category, these inadvertent duplicate selections constituted 61.5 % of the total undervote. Therefore, the first priority of any new technology deployed should be a feature that simply does not permit the elector to overvote.

The Commission also evaluated data concerning the undervote variations that exist by race. This analysis focused on presidential undercount rates in precincts that had black registration percentages of 80 % or more, compared to predominately white precincts in the same county.

The data indicates that, across the board, the percentage of undervotes is higher in predominately black precincts than in predominately white precincts in the same county. This variation is referred to as the “undervote gap.” Surprisingly, the undervote gap was greater in counties that use opti-scan systems than in counties that use the punch card. And some of the highest undervote percentages found were in African-American precincts using optical scan equipment.

The Commission also studied 2000 undervote statistics collected from jurisdictions that have deployed current generation DRE equipment. A summary of this **DRE Analysis** follows.

DRE Analysis

14,754 Votes Counted	<u>County and State</u>	<u>Undervote Rate</u>	<u>Times Lower than Georgia's</u>
	Mecosta, MI	1.86%	2
163,417 Votes Counted	Sedgwick, KS	1.08%	3
451,127 Votes Counted	Riverside, CA	0.9%	4
382,198 Votes Counted	Clark, NV	0.67%	5
413,775 Votes Counted	Fairfax, VA	0.6%	6
36,846 Votes Counted	Albemarle, VA	0.3%	12

DRE Analysis on Election Day

	<u>Clark County, Nevada</u>	<u>Bibb County, Georgia</u>	<u>Times Lower</u>
White Precincts	0.22%	2.9%	13
Minority Precincts	0.92%	8.1%	8

DRE Analysis on Election Day

	Clark County, <u>Nevada</u>	Chatham County, <u>Georgia</u>	Times <u>Lower</u>
White Precincts	0.22%	1.7%	7
Minority Precincts	0.92%	4.8%	5

DRE Analysis on Election Day

	Clark County, <u>Nevada</u>	Dougherty Co., <u>Georgia</u>	Times <u>Lower</u>
White Precincts	0.22%	2.4%	11
Minority Precincts	0.92%	9.9%	11

Optical scan, it should be noted, shows the best *overall* accuracy performance of any of the systems currently in use in Georgia. Several counties using this equipment exhibit very low undervote rates. But it is the Commission's view that, taken as a whole, the wide variations in optical scan accuracy performance from county to county and from precinct to precinct, and the system's inability to provide voter feedback, to accommodate the disabled who wish to vote independently, and to prevent overvotes, cause us to conclude that it is not our preferred uniform statewide system for in-person voting at the precinct on election day, or for in-person absentee voting at the county elections office.

The unique features and capabilities of DRE equipment, the data collected from jurisdictions that have deployed new generation electronic equipment, and our personal observations of systems in use both in other states and in Georgia during the pilot project, all confirm for us that DRE is the best option for Georgia.

Experience of Other Jurisdictions

When the Commission began its work in April no manufacturer of DRE equipment had yet obtained certification of their system in Georgia. No county or municipality in our state had ever conducted an election with this equipment. Many of the members of the Commission had never actually seen a DRE unit in operation. While demonstrations of functions and features by equipment manufacturers were helpful, members recognized that it was also important to observe electronic equipment in use in other jurisdictions with real voters in real elections. In addition, the Commission sought out the views and advice of election officials who had supervised DRE deployments in other states.

Commission members and Secretary of State staff were able to witness elections in Oakland, California; Cleveland, Ohio; Burnetown, South Carolina, and Nassau County, Florida.

In April, Commission member Rep. Buddy DeLoach and Michael Barnes of the Secretary of State's office traveled to Oakland, California to observe a special election to fill a seat on the Oakland City Council. The election covered 26 precincts on the eastern side of the City of Oakland. Rep. DeLoach and Mr. Barnes visited many of the precincts and spoke with poll workers and voters. The reactions of Oakland citizens appeared to be extremely positive even though many of the voters were using a DRE system for the first time. It was notable that in addition to the usual contingent of poll workers, each polling precinct had high school honor students available at the site to help answer questions regarding the use of the DRE systems. Voters seemed to enjoy having a student available to assist them if necessary, and the Oakland experience demonstrated the value of strong voter education programs with a new system deployment.

In August, Commission members Linda Beazley, Linda Latimore, Lynn Bailey, Kathy Rogers, Mike Bracewell, Ken VanHorn, and Michael Barnes of the Secretary of State's office traveled to Cleveland, Ohio to witness an election involving an airport land issue. Members of the Commission were able to speak with poll workers and voters and get their impressions of the DRE while visiting the polls. Commission members were impressed by the sense of ease the voters displayed after completing their ballots. Poll workers noted how easy poll opening had been that morning and how easy it was to learn the system during pre-election training. Voters were given an option when they signed in at the polls to either use the new DRE system, or cast their vote on a punch card system, which had been used for all elections prior to this one. Of the more than 9,000 voters who cast ballots on election day, only 52 opted to use the old punch card system.

Also in August, Commission members Lynn Bailey and Kathy Rogers traveled to Burnetown, South Carolina to witness a special election to fill a city council vacancy. Both Commission members were able to speak with voters to get their reaction to the particular system that was being used for this election. The DRE system used in South Carolina was different from the two observed previously, but voters in South Carolina expressed the same sense of ease of use as voters in California and Ohio.

In September, Commission members Lynn Bailey, Linda Latimore, Michael Cartwright, Mike Bracewell and Ann Hicks and Michael Barnes of the Secretary of State's office traveled to Nassau County, Florida to witness the first election in the State of Florida utilizing DRE voting equipment. Again, members saw DRE's ease of use. In that election a visually impaired voter was able to vote without assistance for the first time ever in that county by using the DRE system audio interface.

In addition to these site visits, the Commission invited two election officials from other states to share their experiences on the selection and deployment of DRE equipment. At its Rome meeting in late June, the Commission heard presentations from Lynda Britt, election superintendent of Brunswick County, North Carolina, and Brad Clark, chief of elections in Alameda County, California.

Ms. Britt, who serves a county that is predominately rural with large numbers of elderly voters, reported that she had found that all groups adapted easily to the DRE system. She cited as DRE strengths the ability to allow the disabled to vote independently, to accommodate multiple ballot styles, to produce ballots in multiple languages and to prohibit the voter from casting a duplicate, or overvote. Ms. Britt said storage requirements were modest and reliability of units was high, and the DRE system was so popular that citizens would never permit her to go back to a non-DRE system.

Mr. Clark supervises elections in a very different kind of community – large, urban and one of the most ethnically diverse counties in the United States. In fact, Alameda County prints ballots in four languages to accommodate its diverse population. Mr. Clark noted that the DRE system deployed in Alameda has the virtues of a “confirmation screen,” to allow voters to go back and make corrections in the ballot, an audio interface to accommodate the visually impaired, programming flexibility to allow the ballot to be prepared in several languages without additional printing expense and a feature that eliminates overvotes.

The experiences of Ms. Britt and Mr. Clark, and personal observations by Commission members during site visits, confirmed how important it is to have an extensive and well organized voter education program to ease the transition to a new voting system. In every instance local election officials pointed to the need to well acquaint voters with the new technology before “going live” on election day.

The Electronic Voting Pilot Project – Vendors and Cities

Selecting Municipalities

Critical to the success of the pilot project was the voluntary participation of 13 municipalities in every region of the state. Not long after the proposal for the pilot was announced in January 2000 cities began to step forward to volunteer to participate. Those who expressed initial interest were asked to complete a formal application, and some 32 cities completed this process.

With limited funds and staff resources, the Commission recognized that only a fraction of the applicants could be selected. Some cities with outstanding proposals could not be chosen because they had far too many registered voters – with a limited number of voting units, their selection would have required all or nearly all the equipment available.

The Commission approached the selection process with several criteria in mind:

- 1) Geographic diversity. To the greatest extent possible, every region of the state should have an opportunity to participate.
- 2) Demographic diversity. Several of the cities selected should include substantial numbers of minority voters.
- 3) Partisan diversity. Also important was to insure that there were communities selected that represented partisan diversity and balance.
- 4) Population. As noted above, a limited budget and finite number of voting units meant there were limitations on the size of a municipality that could be selected.
- 5) Likelihood of contested election. Quite a few cities have municipal elections where no candidates on the ballot face opposition. When an entire slate is unopposed, Georgia law allows the municipality to avoid the expense of an election. Candidate qualifying would not occur until September, so SOS staff and the Commission had to make some educated guesses about cities that were likely to have contested races in November.
- 6) Community interest and support. The weight of insuring a successful DRE pilot would rest primarily on local election officials, other municipal leaders and community and civic leadership. The Commission sought cities that were enthusiastic, well organized and motivated to excel.

After careful consideration the Commission selected the following cities to be Pilot Project Host Cities:

Buena Vista
Canton
Dawson

Decatur
Hogansville
LaGrange

Lithonia
Reidsville
Rome
Statesboro

Suwanee
Thomasville
West Point

Vendor Participation

A second critical element in executing the DRE pilot project was qualified and enthusiastic vendors who were prepared to participate under the framework established for the Georgia test initiative. Beginning in January, SOS staff began contacting DRE manufacturers to make them aware of Georgia's plans and to encourage them to begin the certification process in our state.

DRE systems, as with all election systems in use in Georgia, were required to obtain both national and Georgia certification of their voting units.

The national certification process is demanding and often lengthy. Equipment standards are set by the Federal Election Commission (FEC) and administered by the National Association of State Election Directors (NASSED). NASSED, in turn, selects competent and experienced testing laboratories, called Independent Testing Agencies (ITAs) to actually perform the work of carefully examining all components of a new voting system. ITAs put both hardware and software through rigorous tests to determine if the systems are accurate, secure, durable and reliable. Units are subjected to extreme environmental conditions, dropped from a table (to assess durability) and lab testers attempt to defeat security and other components. Only after an election system has successfully completed the FEC/NASSED/ITA certification regimen may it then be submitted for certification in Georgia.

Georgia certification testing is also intensive, conducted by Dr. Britt Williams of the computer science department of Kennesaw State University. Dr. Williams is a nationally recognized expert on election technology who sits on the NASSED board that oversees the enforcement of national standards. Testing of a new unit is performed in KSU labs with several county election officials on hand as observers and witnesses. The Georgia certification process is designed to add an additional element of certainty that voting units are accurate, secure and comply with the requirements of Georgia law.

Seven vendors of DRE voting equipment petitioned to participate in the November 2001 pilot project. At a June meeting of the Voting Commission in Atlanta, all seven vendors were asked to demonstrate their equipment and speak about their experience and track record in the industry. The Commission recommended that all seven vendors be allowed to participate in the project, provided that each acquired the necessary national and state certifications in time to adequately prepare for the November election. In the end, six of the seven initial vendors were able to complete certification by the deadline established by the Commission and allowed to participate in the project.

The Office of Secretary of State entered into contracts with each of the six certified vendors. Under a lease agreement, manufacturers agreed to provide the equipment at a special rate of \$600 per voting unit. The contracts also required that vendors transport the units to and from the cities, provide training for both election superintendents and poll workers, assist with voter education efforts via public demonstrations, and have staff present in precincts to provide election day support. The six vendors who participated were:

Diversified Dynamics
Election Systems and Software
Global Election Systems
Hart InterCivic
Shoup Voting Solutions
Unilect Corporation

Many city officials would later compliment the commitment and responsiveness of participating vendors who were helpful partners in the months leading up to election day. The pilot project experience reinforced to Commission members how very important it is to select a manufacturer who not only can design and deploy an accurate, secure and user-friendly system, but also one that is thoroughly committed to providing excellent training, support and service after the sale.

Community Voter Education Efforts

Testimony before the Commission by election officials who had deployed DRE systems and members' own personal observations during site visits of DRE elections in other states made it clear that, to improve citizen acceptance and reduce election day confusion, vigorous voter education efforts would be needed in each participating city.

It is the Commission's view that no single factor contributed more to the success of the pilot project than aggressive, community-based voter education programs. These efforts included:

- Voting instructions were mailed to every registered voter in each pilot city. The mailing informed voters of the upcoming pilot test and provided precise, step-by-step instructions on how to use the voting unit. A sample instruction sheet for one system is depicted on the following page.
- A test unit available at each precinct on election day. Voters were given the opportunity to "test drive" the equipment and ask questions before proceeding to cast their official ballot.
- An extensive public relations campaign to inform community print and broadcast media outlets about the pilot, and to provide specific information on how to use the DRE units.
- An intensive schedule of public demonstrations, bringing DRE units into civic clubs, churches, community centers, shopping areas and other high traffic locations.

As the need for extensive voter education programs became apparent, Secretary of State Cox sought and received from Governor Barnes \$65,000 in discretionary funds to enable each participating city to hire their own temporary voter education coordinator. Funds were allocated to the cities under a formula based on population, and positions were funded from September until November. The Commission and Secretary of State established guidelines and requirements for the education coordinator positions, but hiring was done at the local level by participating cities.

With this decentralized approach, controlled by local officials, voter education coordinators with a thorough understanding of community needs were selected and quickly put into the field. Literally hundreds of DRE unit demonstrations were conducted by coordinators, bringing grass roots voter education to every segment of participating communities.

The effectiveness of the voter education program is readily apparent from exit polling of pilot project voters. Some 69 % of those interviewed said they had received information about how to correctly use the voting equipment before election day.

Local election officials reported that they believe the extensive voter education campaign helped reduce apprehension about the new technology, with citizens frequently

expressing surprise after their first exposure to the systems at the ease of use of the DRE units. Others expressed the view that voter education helped build excitement in the election itself, with Suwanee, West Point and Hogansville all reporting much higher than expected voter turnout on election day.

As Georgia moves to deploy a uniform system of voting in all 159 counties by 2004, it is the view of the Commission that carefully planned and sufficiently funded voter education programs are essential to the smooth adoption of this new technology.

Example of Voter Instruction Sheet Prepared for Each DRE Vendor



How to Cast A Ballot Using a DRE Voting Unit

When you go to the polls this November, you will find voting equipment that looks more like an automatic teller machine at your bank than the punch card or lever system you are used to seeing. And it is just as easy to use as your ATM. To cast a ballot on this equipment you:

1. Sign-in and show I.D. to your poll worker.
2. You will receive a **“Smart Card”** in place of a ballot. You will use this card like an ATM card to **“unlock”** the voting terminal.
3. Proceed to the first available voting terminal and follow the directions on the front of the equipment to properly insert your **“Smart Card.”** Your ballot will then appear on the screen.
4. Once your ballot appears, **touch the name of the candidate you wish to vote for.** Your selection will then be highlighted on the screen. To proceed to the next page, press the **“Next Button”** located at the bottom of the screen.
5. A **“Review Screen”** will appear when you have completed your ballot, allowing you to confirm your selections. If you make a mistake you **CAN** easily change your vote by touching the race in question to return to that ballot page. This will **“deselect”** your previous choice allowing you to make another selection. Repeat step four to select a new candidate. Return to the **“Review Screen”** by pressing the **“Next Button”** at the bottom of the screen.
6. To cast your vote press the **“Cast Ballot”** button. Once the **“Cast Ballot”** button is pressed no changes can be made.
7. After casting your ballot the **“Smart Card”** will be ejected. Please return it to a poll worker stationed nearby.

For more information, or to learn where you can cast a practice ballot before the November election, contact your local municipal election office. **In Buena Vista call (229) 649-5542 and in Dawson (229) 995-4444.**

Election Day Experience

Planning, preparation, training and voter education by local election officials, education coordinators and participating vendors came together on Tuesday, November 6th. The elections held in 13 participating cities were nearly universally problem and error-free. Public response, as discussed in the following section on Exit Polling, was almost entirely positive.

The contested races on the ballot in pilot project elections were:

Buena Vista – City Council Seats

Canton – Citywide Referendum

Dawson – City Council Seat

Decatur – City Council Seats

Hogansville – City Council Seats

LaGrange – City Council Seat

Lithonia – City Council Seats

Reidsville – City Council Seat

Rome – Board of Education Seats and Countywide Referendum

Statesboro – City Council Seat

Suwanee – Citywide Referendum

Thomasville – City Council Seat

West Point – City Council Seat

Twelve Commission members visited Pilot Cities on election day, with some members visiting multiple precincts. At the Commission's final 2001 meeting in December, municipal election officials testified about their observations of the election process in their cities. Each official also completed a survey with their observations and recommendations, and SOS staff conducted in-depth debriefing interviews with them as well.

Some common themes emerged from these observations and comments:

- Voter education was critical to success. In addition to community outreach efforts, several cities had students on hand in the precinct to encourage voters to learn about the equipment before casting their official ballot. Voters responded extremely well to these student volunteers. The use of new technology enhanced public interest in the election.
- Most participating vendors provided excellent training and support.
- Many election officials found that designing the electronic ballot was quick and easy.
- Very few problems with system reliability were reported.
- Most election officials felt confident in the equipment.

- Media attention of the Pilot was extensive, and helped advance public awareness of equipment features.
- Three cities had visually impaired voters who were, for the first time in their lives, able to vote independently and without assistance.
- The speed of tabulating results was remarkable. Most results were computed in a matter of minutes. One recount that was performed took only 30 minutes.
- The complete absence of overvotes was a real benefit...and a first in many communities.
- Several election officials expressed the desire to deploy DRE in their communities right away, and saw significant advantages over their existing systems.

A comparison of undervote performance among cities and systems, and between the DRE units tested and the equipment normally deployed in these communities, although desirable, is not possible. The reason is each municipal election in the 13 cities was unique – with different offices and ballot questions and numerous unopposed candidates. Some cities chose members of council, others selected school board members and some saw referendum questions on the ballot. The baseline SOS 2000 presidential undervote analysis was very different – an “apples to apples” comparison because, in that instance, every voter in every county was presented with the same candidate choices for president – and this choice appeared at the top of every ballot. Nevertheless, participating local election officials did report that they believed undervotes in these elections had been reduced, in large part because of the DRE system’s ability to prevent overvotes and to notify voters of selections they had failed to make.

Exit Polling Results

Overseeing the largest ever test of electronic voting equipment, the Commission recognized that this project presented an extraordinary opportunity to measure public attitudes and opinions about DRE voting technology. In June the Secretary of State's office entered into a contract with the Survey Research Center of the Institute for Behavioral Research at the University of Georgia. The Center has extensive expertise and experience in designing public opinion surveys and compiling and interpreting poll results.

To field such an extensive survey in a cost effective manner, the Secretary of State's office recruited 143 Georgia college students to work as interviewers, to be stationed outside of precinct locations in each Pilot City. Students, who were paid a modest amount for their time, received training on components of the survey instrument and proper polling techniques.

Exit poll takers collected nearly 2,200 responses from voters in each Pilot City, a remarkably large sample that provides a strong statistical foundation for conclusions drawn from the survey. More than 15 % of those who cast votes in the pilot project were polled in the survey.

The complete survey data set offers a wealth of information concerning voter attitudes about electronic voting, and the specific equipment they encountered on election day. Dr. James Bason, Director of the University of Georgia's Survey Research Center, compiled and interpreted the results for the Commission.

By almost any measure, the exit poll results show remarkably positive responses to the new voting technology. In the words of Dr. Bason, "For a survey person, it's unbelievable. You never see numbers this high."

Some of the most important highlights from the survey findings:

- 94.5 % of voters who had just 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.
- Nearly 96 % of those polled said they were "confident" or "very confident" that their vote was recorded correctly.

Selected Exit Poll Survey Results

Ease of System Use

- *How Easy Was the Voting Equipment to Use?*

	n	%
Very Easy	1701	77.9
Easy	421	19.3
Neither Easy nor Hard	35	1.6
Hard	17	0.8
Very Hard	8	0.4
Don't Know	1	0.0
TOTAL	2183	100.0

- *Georgia should upgrade its voting system to a system like the one I used today.*

	n	%
Strongly Agree	1458	67.3
Agree	589	27.2
Disagree	46	2.1
Strongly Disagree	17	0.8
Don't Know	56	2.6
TOTAL	2166	100.0

- *How Confident Were You That Your Vote Was Recorded Correctly? Were You...*

	n	%
Extremely Confident	1385	63.7
Confident	701	32.2
Not Very Confident	36	1.7
Not Confident at All	12	0.6
No Opinion	40	1.8
TOTAL	2174	100.0

-
- *In comparison with voting equipment you used the last time you voted, was this system...?*

	n	%
Much Better	1619	74.5
Somewhat Better	371	17.0
No Better or Worse	118	5.4
Somewhat Worse	16	0.7
Much Worse	14	0.6
First Time Voter	22	1.0
Don't Know	16	0.7
TOTAL	2176	100.0

Critics of electronic voting systems often express the concern that elderly voters, in particular, would be reluctant to adapt to new computerized voting technologies. The survey results fly directly in the face of those preconceptions. Exit poll respondents age 65 and older endorsed the new DRE equipment at nearly the same percentages as those in younger age groups. Some 96.6 % of voters over age 65 rated the equipment “very easy” or “easy” to use and 96 % agreed that Georgia “Should upgrade its voting system to a system like the one I used today.” Seniors were somewhat less likely to respond with the top response (“Very Easy” and “Strongly Agree”) but more likely to give the second most favorable response (“Easy” and “Agree”). When the two favorable responses in each question are aggregated, older voters are just as positive about DRE equipment as their younger peers.

Nearly nine out of ten seniors also said the electronic ballot “was easier to see and read” and 82.7 % rated the DRE equipment as “much better” or “somewhat better” than the equipment they normally cast votes on.

**Ease of System Use,
By Age**

- *How Easy Was the Voting Equipment to Use?*

	18 – 24	25 – 34	35 – 49	50 – 64	65+
Very Easy	83.6	84.1	82.7	77.9	70.3
Easy	16.4	14.2	14.8	19.2	26.3
Neither Easy nor Hard	0.0	1.7	1.5	1.4	2.0
Hard	0.0	0.0	0.4	1.2	1.0
Very Hard	0.0	0.0	0.6	0.3	0.3

-
- *Georgia Should Upgrade Its Voting System To a System Like The One I Used Today.*

	18 – 24	25 – 34	35 – 49	50 – 64	65+
Strongly Agree	70.9	72.8	71.0	69.7	65.0
Agree	25.5	25.4	26.4	27.5	31.0
Disagree	1.8	1.7	1.8	2.8	2.0
Strongly Disagree	1.8	0.0	0.8	0.0	2.0

The survey found there also were not significant racial or ethnic differences in responses to the most important questions about DRE voting.

**Ease of System Use,
By Race/Ethnicity**

- *How Easy Was the Voting Equipment to Use?*

	White	African-American	Asian	Hispanic	Multi-Racial
Very Easy	80.4	73.1	66.7	81.8	71.7
Easy	17.5	24.3	16.6	18.2	18.9
Neither Easy nor Hard	1.5	1.1	16.6	0.0	3.7
Hard	0.4	1.1	0.0	0.0	5.7
Very Hard	0.2	0.4	0.0	0.0	0.0
TOTAL	100.0	100.0	99.9	100.0	100.0

- *How Easy Was it to Move Through the Ballot?*

Very Easy	74.5	67.9	33.3	90.9	58.8
Easy	22.7	28.8	66.7	9.1	35.3
Neither Easy nor Hard	1.9	2.1	0.0	0.0	2.0
Hard	0.6	1.1	0.0	0.0	3.9
Very Hard	0.3	0.0	0.0	0.0	0.0
TOTAL	100.0	99.9	100.0	100.0	100.0

- *Georgia should upgrade its voting system to a system like the one I used today.*

Strongly Agree	69.7	71.5	66.7	54.5	59.6
Agree	27.3	26.6	33.3	36.4	34.6
Disagree	2.2	1.5	0.0	9.1	3.8
Strongly Disagree	0.7	0.4	0.0	0.0	1.9
TOTAL	99.9	100.0	100.0	100.0	99.9

As more and more states begin to focus on election reform, Georgia is being looked to as a leader in testing and evaluation of equipment types. Several states, including Maryland, Mississippi, Pennsylvania, and Idaho have expressed interest in using our pilot project findings as research in their own reform projects.

Recommendations of the Commission

Based on extensive analysis and review of data, public testimony and our personal observations during the course of the pilot project, we, the members of the 21st Century Voting Commission make to the Governor and members of the General Assembly the following recommendations:

- Georgia’s uniform election platform should be a DRE voting system used for election day in-precinct voting, for in-person absentee voting, and, if authorized by new legislation, for in-person “advance” or “early” voting.
- The DRE system selected should have the capability to prevent duplicate, or overvotes, provide voters with a “summary screen” to warn voters of potential undervotes or selection errors, and include a process for voters to correct errors or omissions before a final vote is cast.
- The system should have the capability to store and retrieve thousands of ballot styles.
- The system should have the ability to display an easy to read ballot in multiple languages.
- The chosen system should have the capability to produce an independent and paper audit trail of every ballot cast.
- The system should have on-board battery back up power sufficient to operate the equipment in case of external power failure for an entire election day.
- The chosen system should permit a visually impaired voter, and others with disabilities, to cast a ballot independently and without assistance.
- For absentee voting by mail, the uniform system to be employed should be an optical scan system. The optical scan system should provide a mailable ballot and integrate seamlessly with the DRE components of the system.
- The uniform election system should be controlled by an Election Management System or software program that will allow election officials to easily design both DRE and optical scan ballot formats simultaneously, that will integrate all results into a single vote tallying report, with additional reporting capabilities, and that will easily interface with existing and future voter registration systems.
- The Election Management System should allow elections officials to conduct the entire election with no vendor assistance if so desired by the local jurisdiction.
- The Election Management System should be flexible enough to allow the import/export of ballot information and voter registration information to and from a centralized statewide database, to enable future remote voting and easier voter check-in at the polls.

- The state should seek to maximize benefits of deploying a uniform system that will translate into long-term benefits for local governments by securing in the initial procurement process a:
 - Statewide license
 - Statewide contract price for technical support and maintenance (optional service available after initial installation period)
 - Statewide contract price for additional or replacement equipment.

With the passage of SB 213, the successful completion of the nation's largest ever test of new voting technology, and a broad based commitment by state and local policymakers who are committed to election reform, Georgia is poised to take a dramatic step forward in improving the accuracy and convenience of its elections. We strongly support the acquisition and deployment of a uniform DRE system to insure that our state seizes this historic opportunity.

—

City of Canton

December 20, 2001

The Honorable Cathy Cox, Secretary of State
Members of the 21st Voting Commission
2 Martin Luther King, Jr. Drive
Atlanta, Georgia 30334



Re: Pilot Project

667 Marietta Highway
Canton, Georgia 30114
770 704 1520 phone
770 704 1538 fax
www.canton-georgia.com

Cecil Pruett
Mayor

Wade Buchanan
Wally Fowler
Steve Hansen, Jr.
C.B. Rogers
Amelia Rose
Jo Ellen Wilson
City Council

Eddie McCollum
City Manager

Diana G. Threewitt
City Clerk/Treasurer

The City of Canton had a great response from the citizens who were excited to use the new e-Slate voting equipment. They were skeptical at first, but after being informed and trained on the new equipment, they were comfortable and confident when they came to the polls to cast their ballots. We feel that having a Voter Education Coordinator made a huge difference.

Our election went great and we had a steady stream of voters all day long. The poll workers were trained and felt confident using the new equipment. We had eight high school students to help us during the day by giving demonstrations on the e-Slate equipment to help our voters feel more at ease when they got to the voting booths.

The e-slate equipment was very simple to use and did not allow voters to do an over vote. It gave you a chance to change your mind without spoiling a ballot or being embarrassed to ask for another ballot. It gave independence to differently disabled voters and it allowed the poll workers ease in setting up the equipment. We only needed one electrical outlet for twelve e-Slates and a JBC.

We were able to do our ballots in-house because the program is a Windows based program and simple to use. We were able to have unofficial election reports within minutes of the close of the election and official election reports within fifteen minutes to document all our reports.

The Mayor and Council and our citizens backed me completely with the Pilot Project. We feel that uniformity throughout the state makes it easier for all citizens and poll workers. We are all voting on the same piece of equipment and the reports handed into the state department will all be the same. We were honored and excited to be a part of this pilot project and a part of making history. We were also honored to have Cathy Cox to visit our City and watch as we closed the polls.

Sincerely,

Diana Threewitt
City Clerk/Superintendent of Elections

DT/mst

ABIGAIL D. RAKEL - Ward 1
JAMES LETROY LEWIS - Ward 2
CALVIN A. STEPHENS - Ward 3



JOHN HARRIS - Ward 4
MARJORIE M. TURNER - Ward 5
WILL D. HARDEN - Ward 6

BARNEY PARNACOTT
CITY MANAGER

ROBERT L. ALBRITTEN
MAYOR

JIM COLLIER
CITY ATTORNEY

13 December 2001

Mr. Michael Barnes
Assistant Director of Elections
Secretary of State
Suite 1104, West Tower
2 Martin Luther King Jr., Drive, S.E.
Atlanta, Ga. 30334-1505

Dear Mr. Barnes:

The City of Dawson, Georgia was very excited and honored to have the opportunity to participate in the Pilot Cities Project this election year.

Our experience with this project was very rewarding. Our vendor, Global Election Systems, provided continuous help to us right up through election day and several days after. Global representatives are very knowledgeable in all areas of elections. The poll workers really liked the new equipment and found it easy to learn to operate as well as help electors learn at the polls. Every comment we had at the polls was a positive response to the new equipment.

At the close of the polls, the City was able to obtain many reports that were never before available to us at the touch of a button. I sincerely hope all of Georgia will be able to benefit from DRE voting equipment.

Thank you for allowing us the opportunity to take part in this very exciting and much needed project.

Yours very truly,

Sheri L. Howard
City Clerk



DONALD W. BOYD
PROBATE JUDGE OF TROUP COUNTY
900 DALLIS STREET
LAGRANGE, GEORGIA 30240



December 11, 2001

Dear Honorable Governor Roy Barnes and General Assembly:

The Pilot Project for the Municipalities of West Point, Hogansville and LaGrange was a great success. The key to the success was complete support and training by the vendor and a very well coordinated effort to educate the voters by using Voter Education Coordinators from each city to demonstrate, speak about and answer questions at as many civic groups, senior citizen centers, church groups and public locations as possible.

The Poll workers and voters were very excited and complimentary about the ease and simplicity of the Unilect Touch Screen voting system. The Poll workers were able to close the polls with unofficial results in less than 3 minutes with one touch of a button.

The votes were certified in LaGrange, which is centrally located between West Point and Hogansville. The drive from West Point and Hogansville to LaGrange is about 30 minutes. We were completely thru with the certified results including absentee ballots from all 3 cities by 8:30 p.m. Our Post Election Workers were cut in half, which was a large savings for the cities; also not having to print ballots for all the eligible active voters was a big dollar savings for the cities.

The over vote was totally eliminated and with the review screen most all of the unwanted under vote was eliminated. We had 3 very close races in Hogansville decided by less than 10 votes; the candidates requested a recount and the results were the same with no complaints from the candidates.

I highly recommend the State go to a Unified Electronic Voting System as soon as possible. Georgia will be the leader in Election Reform in the 21st century and assure each individual voter that his or her vote will count.

Thank you very much,

Donald W. Boyd
Troup County Election Superintendent

LINDA W. LATIMORE
VOTER REGISTRATION & ELECTIONS DIRECTOR
(404) 298-4820
FAX (404) 298-4038



BOARD MEMBERS
JEFFERY L. BOYD
EDIE J. NOBURY
ROBERT "BUZZ" POWELL
SAMUEL E. TILLMAN
JERRY WYATT

Board of Registration and Elections
4380 Memorial Drive, Suite 300
Decatur, Georgia 30032

December 11, 2001

The Honorable Cathy Cox
Secretary of State
2 Martin Luther King, Jr. Drive, SE
Atlanta, GA 30334-1505

Dear Secretary Cox:

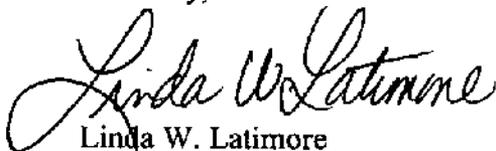
The DeKalb County Board of Registration and Elections was very excited and pleased to be part of the Pilot Project in conducting the Decatur and Lithonia Municipal Elections.

Overall, response from the voters and city officials was very positive. The office of the Secretary of State was extremely helpful by providing Voter Education personnel for each of the two cities to assist in training and demonstrations. A high level of voter interest was indicated by well-attended demonstrations and inquiries from the public.

We worked very hard with the vendor assigned to DeKalb County in order to meet the timeline deadlines instituted by the state. We ran into some software problems as well as problems with the test election, but were able to work through them. By Election Day, everything was on schedule and votes were recorded and counted in a timely manner. Further, we received positive feedback from the voters regarding ease of using the system.

I heartily recommend the use of a statewide DRE voting system; however, it is imperative that the contract be awarded to a company with vast election experience and enough resources to meet the challenges of such magnitude.

Sincerely,


Linda W. Latimore
Director



CITY CLERK'S OFFICE

City of Rome
Georgia

PILOT PROJECT/MUNICIPAL ELECTION 2001

P O BOX 1433
ROME, GEORGIA 30162-1433
706/236-4460
FAX 706/236-4548

DEAR 21ST CENTURY VOTE COMMISSION:

THANK YOU VERY MUCH FOR GIVING THE CITY OF ROME THE OPPORTUNITY TO BE A PART OF THE PILOT PROJECT AND TO BE ONE OF THE FIRST CITIES TO USE THE NEW ELECTRONIC VOTING EQUIPMENT.

WE WERE PLEASED THAT YOU THOUGHT OF US AND GAVE US A CHANCE IN THE HISTORY-MAKING IN GEORGIA.

THE ELECTION HERE IN ROME WAS A COMPLETE SUCCESS, AND EVERY POSSIBLE CONTACT WAS MADE TO INFORM AND EDUCATE THE VOTER. THE LETTER FROM THE SECRETARY OF STATE, THE HONORABLE CATHY COX, WAS JUST WHAT THE VOTERS NEEDED BECAUSE IT WAS A PERSONAL CONTACT TO THEM. THE VOTERS HERE FELT SHE SHOWED CONCERN AND INTEREST ABOUT THE VOTING PROCESS IN GEORGIA, WHICH INCLUDED THEM.

I HAVE BEEN AN ELECTIONS OFFICIAL OVER 16 YEARS, AND NEVER EXPERIENCED THE EASE, CONFIDENCE AND QUICKNESS THIS ELECTION EXEMPLIFIED. I CAN'T SAY ENOUGH ABOUT HOW PROUD I WAS TO BE INCLUDED IN THIS PILOT PROJECT.

AS YOU KNOW, WE USED THE OPTICAL SCAN VOTING EQUIPMENT AS WELL AS THE NEW ELECTRONIC VOTING EQUIPMENT, SO THAT GAVE ME A CHANCE TO COMPARE THE DIFFERENCE BETWEEN THE TWO. IT TOOK LESS THAN 15 MINUTES TO CLOSE THE POLLS WITH COMPLETE TOTALS USING THE ESTATE ELECTRONIC VOTING EQUIPMENT AND ANOTHER ONE HOUR AND HALF WITH THE OPTICAL SCAN.

RESPONSES FROM THE VOTERS WERE VERY POSITIVE. THEY WERE VERY EXCITED ONCE THEY HAD THE OPPORTUNITY TO TEST THE EQUIPMENT THEMSELVES. THE NEW DIRECT RECORDING ELECTRONIC VOTING SYSTEM PREVENTS OVERVOTES AT THE POLLING PLACE AND PROVIDES THE VOTER WITH THE ABILITY TO REVIEW THE COMPLETED BALLOT BEFORE SUBMITTING HIS OR HER VOTE. THE SENIOR CITIZENS WERE LIKE CHILDREN WITH A NEW TOY AND THEY QUICKLY LEARNED HOW TO USE THE EQUIPMENT.

THE POLL WORKERS DID NOT REQUIRE MUCH ASSISTANCE AND THEY WERE COMFORTABLE WITH THE EQUIPMENT AND ITS USE. WE WERE ABLE TO DESIGN THE BALLOT IN HOUSE WITH A SOFTWARE PROGRAM AND THAT GAVE US THE EXPERIENCE AND ASSURANCE OF SEEING HOW SIMPLE THE PROGRAMMING PROCESS FOR ELECTIONS COULD BE.

HART INTERCIVIC DID EVERYTHING TO GIVE ASSISTANCE TO MAKE SURE WE UNDERSTOOD THE SETUP OF THE EQUIPMENT AND TRAINING OF THE POLLWORKERS WITHOUT BEING INTIMIDATED.

AGAIN, THE CITY OF ROME THANK YOU FOR THIS GREAT OPPORTUNITY.

SINCERELY YOURS,

**EVON BILLUPS, ELECTIONS SUPERVISOR
CITY OF ROME**



COUNCIL

Joe R. Brannen
Merle E. Clark, Jr.
Wendell W. Hagins
Gary L. Lewis
John T. Morris

CITY OF STATESBORO
50 EAST MAIN STREET
P.O. Box 348
STATESBORO, GEORGIA 30459-0348

William S. Hatcher II, Mayor
George A. Wood, City Manager
Judy M. McCorkle, C.M.C City Clerk
Robert Cheshire, P.E., City Engineer
Sam Brannen, City Attorney

January 8, 2002

Honorable Cathy Cox
Secretary of State
Suite 1104, West Tower
2 Martin Luther King, Jr. Drive, S.E.
Atlanta, Georgia 30334 - 1505

Dear Secretary Cox:

I would like to express appreciation to you and members of the 21st Century Voting Commission for the opportunity for Statesboro voters to participate in the November Electronic Voting Pilot Project. We were very honored and pleased to be asked to make a contribution towards improving the integrity of the elections process for all Georgians.

In the ten years that I have worked in elections I have never conducted one that ran as smooth as our November 2001 election. The results were fast and accurate and the reports were timely and efficient. With a system such as this in place all Georgians would be assured that their votes are secure, secret, and, most importantly, counted. While I realize the enormity of the cost involved to implement a system such as this statewide, I question how can we afford not to.

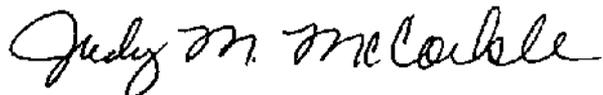
My fellow Georgia election officials are excited about the prospect of electronic voting equipment and even more so about achieving a uniform voting system where we all vote on the same equipment using the same rules. We have been overwhelmed with the positive responses from our poll workers and, more importantly, from our voters who voted on Election Systems & Software's Ivotronic system.



Telephone: (912) 764-5468 • Fax: (912) 764-4691 • email: cityhall@statesboroga.net

Thank you again for affording Statesboro voters the opportunity to have input into the future of Georgia elections. Please call on us anytime that we can be of service to you or to the State of Georgia.

Sincerely,

A handwritten signature in black ink that reads "Judy M. McCorkle". The signature is written in a cursive, flowing style.

Judy M. McCorkle
Election Superintendent

Mayor
Nick Masino

Mayor Pro Tem
Andrew Krieman

Councilmembers
Jimmy Burnette
Jeannine Rispin
Alex Stone
Dave Williams



373 Highway 23 • Suwanee, Georgia 30024
(770) 945-8996 • Fax (770) 945-2792
www.suwanee.com • Email: info@suwanee.com

City Manager
Hardin Watkins

Planning & Community
Development Director
L. Martin Allen

Administrative
Services Director
Diane Boone

Public Works and
Inspections Director
Rich Edinger, P.E.

Financial Services
Director
Amie Sakmar, CPA

December 10, 2001

Mr. Michael Barnes, Assistant Director of Elections
Secretary of State, Elections Division
2 Martin Luther King, Jr. Drive, S.E.
Atlanta, Georgia 30334-1505

Dear Mr. Barnes:

It is my pleasure to report that the City of Suwanee had a most favorable experience with our vendor, Electronic Systems & Software, during our November election.

Unique to Suwanee was the fact that we had to change vendors late into the process. Our original vendor, VoteHere, was unable to secure national certification by the September 21 deadline. ESS agreed to step in and utilize their system in Suwanee. Almost simultaneous to your informing us of the change, ESS representatives were calling to schedule all of the elements of the process that other cities had been working on since July. I cannot emphasize enough the professionalism, support, guidance, and dedication the staff of ESS demonstrated in preparing and assisting with the election. They were as diligent in ensuring that we had a perfect election as I was. And, a perfect election is what we had.

On election day, we found ourselves serving 1301 voters, two-and-a-half times the highest number of voters in any previous City of Suwanee election. The only negative comments that we received were related to the paper-intensive process of voter verification and certification (the voters would like that process in an electronic format as well).

Our poll workers needed very little assistance during the day (training and ease of use of the system made this possible). The opening and closing of the polls was fast and efficient. The number, and possible formats, of reports is outstanding. The ballot preparation software is simple and straight-forward, and there are no apparent difficulties in individual election superintendents preparing their own ballot.

The City of Suwanee is extremely pleased to have been a part of this Pilot Project and are grateful to Secretary of State Cathy Cox for her vision and leadership. We wholeheartedly endorse the electronic system, and support the Commission and our legislators in approving and implementing a state-wide election system.

If I can ever be of service to you or Secretary Cox and her staff, please do not hesitate to call on me.

Sincerely,

Diane Boone
Administrative Services Director

City of Thomasville

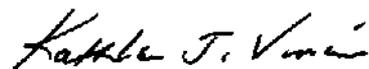
P. O. Box 1540

Thomasville, Georgia 31799

Questions for Pilot City Election Superintendents

1. The overall City of Thomasville response to DRE voting was very, very positive. Although Thomasville is a very traditional town, and there were initial questions and concerns, when we gave it a trial, the voters were very pleased, and want to use this style of voting in future elections.
2. Our voter outreach was also received very positively. Citizens wanted information, and we reached hundreds if not thousands with our demonstrations. Even non-City residents turned out to see "the wave of the future" and were extremely positive about the prospect of DRE voting in the future. We also had a lot of response to the Secretary of State's mailing to the registered voters.
3. This was my first ever election, and Vicki Burnette, the Probate Court Clerk who does the Thomas County Elections, has been running elections for many years. Both of us were very comfortable with our system.
4. Recommendations for a DRE system:
pure touch-screen technology
activation of the system by the poll-worker and not the voter
a summary page feature
5. Advantages of a DRE system for election superintendents and workers:
the elimination of paper ballots
the immediacy of results after precinct closing
the general ease of use for both election workers and voters
6. The level of interest in the election because of our participation in the pilot project was high. We had two precincts with all uncontested races that we opened just to give voters a chance to use the DRE equipment, and we had several hundred voters at those precincts.
7. Based on our experience with the Shoup system, we would both DEFINITELY recommend that the state of Georgia move to a DRE voting system as its uniform system of voting.

One final comment: Even though the State is planning to provide the DRE equipment to the Counties, and to mandate its use in their elections only, I do feel very strongly that the Cities should not be left out as the rest of the state progresses. I feel strongly that the Secretary of State's office should encourage Counties to work cooperatively with Cities to see that voters in municipal elections benefit from these advances. Vicki and I worked very well together, and I anticipate that to continue, but other cities might not be so fortunate.



Kathleen J. Vinson
City Clerk and Election Superintendent