



## The Office of Secretary of State

*Brian P. Kemp*  
SECRETARY OF STATE

April 20, 2018

### VIA U.S. MAIL

Mustaque Ahamad  
898 Kings Ct. NE  
Atlanta, GA 30306

Virginia Forney  
59 Park Ln. NE  
Atlanta, GA 30309

Rhonda J. Martin  
2500 Peachtree Rd. NW  
Unit 606  
Atlanta, GA 30305

David Bader  
1824 Charline Ave. NE  
Atlanta, GA 30306

Merrick Furst  
1707 Wildwood Rd. NE  
Atlanta, GA 30306

Paul Nally  
3667 Hwy 140  
Rydal, GA 30171

Ricardo Davis  
206 Hunters Mill Ln.  
Woodstock, GA 30188

Adam Ghetti  
606 E. Morningside Dr.  
Atlanta, GA 30324

Michael Opitz  
1802 Wynfair Ct.  
Marietta, GA 30062

Richard DeMillo  
2500 Peachtree Rd. NW  
Unit 606  
Atlanta, GA 30305

Jeff Levy  
916 Kings Ct.  
Unit 1201  
Atlanta, GA 30306

Re: Reexamination of Voting System

Dear Georgia Voter,

there were actually 14  
requestors

I am writing because you are one of the ten electors who requested a reexamination of Georgia's current voting system for a determination as to whether it is accurate and safe for use in elections in Georgia. I have attached the reexamination report to this letter. A complete copy with all the appendices is available to review in my office. After reviewing the examination, I have accepted the examination team's recommendation that the current system is accurate and safe for use.

I am attempting  
to obtain the  
appendices.  
More foot-  
dragging going  
on by SOS.

To increase resiliency and to update an aging system, I completely support moving to a new system that includes a voter verifiable paper audit trail. My office is on record saying that Georgia should

Notice that he is not saying "hand marked paper ballots." Voter verifiable paper trail is code for barcode balloting that we fought in SB403.

Georgia • 30334 • Tel: (404) 656-2881  
sos.ga.gov

Not reasonably feasible

aim to have that system in place by the 2020 Presidential Preference Primary. That is why I have formed a bipartisan commission tasked with analyzing the existing options and cost for a new system and presenting its findings to the General Assembly and to the next Secretary of State prior to the 2019 legislative session.

However, the question of what our next voting system should be is a separate one from the question of whether the current system is accurate and safe for use, and I therefore accept the examination team's recommendation.

Thank you for your interest in Georgia's elections.

Sincerely,

A handwritten signature in black ink, appearing to read "B. P. Kemp". The signature is written in a cursive, slightly stylized font.

Brian P. Kemp

Cc: Marilyn Marks ([marilyn@aspenoffice.com](mailto:marilyn@aspenoffice.com)) via email



**OFFICE OF SECRETARY OF STATE**

**I, Brian P. Kemp, Secretary of State of the State of Georgia, do hereby certify that**

does not specify what components, hardware or software he is referencing

an examination of the **current** direct recording electronic voting system used in the state of Georgia was conducted on November 27, 2017 **3 partial days of testing** through November 29, 2017, pursuant to a request made under O.C.G.A. § 21-2-379.2. I further certify that the attached six pages contain a true and correct copy of the report that details the methodology and findings of such examination. As a result of this examination, it is my opinion that this kind of system so examined can be safely and accurately used by the electors of this state in the primaries and elections as provided in Chapter 2 of Title 21 of the Official Code of Georgia; provided, however, I hereby reserve my official authority to reexamine said system at any time so as to ensure that it continues to be one that can be safely and accurately used by the electors of this state.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of my office, at the Capitol, in the City of Atlanta, this 20th day of April, in the year of our Lord Two Thousand and Eighteen and of the Independence of the United States of America the Two Hundred and Forty-Second.



*B. P. Kemp*

**Brian P. Kemp, Secretary of State**



## THE OFFICE OF SECRETARY OF STATE

*Brian P. Kemp*

SECRETARY OF STATE

### EXAMINATION REPORT

Pursuant to a request made under O.C.G.A. § 21-2-379.2, the Georgia Secretary of State's Office conducted an examination to test the accuracy of the direct recording electronic (DRE) voting system currently deployed in Georgia. Without defining what the system components are and what hardware and software versions are included.

#### SUMMARY

The examination consisted of the creation of a mock election so that the examination team could determine whether or not the DREs accurately tallied the votes that were entered. The mock election consisted of one election contest with four candidate choices and one ballot question with "yes" or "no" choices. The process for creating the election database was the same as for a real election. The machines used were the same ones used in real elections. The vote counting method was the same used for real elections. In the mock election, the examination team entered selections determined by a random choice generator immediately prior to voting and videotaped the selections being entered into the machines in order to create a documentary record of the selections.

The results of the examination were that the selections entered into the DREs were accurately counted, reported, and tallied. The results were consistent across each machine used in the examination and across each county. The results also showed that the redundant methods for ensuring accuracy each generated an accurate count. As it should be in a properly functioning system, the vote counts were the same across each method of tabulation and exactly matched the selections entered. Therefore, it is the recommendation of the examination team that the current DREs can be safely and accurately used by electors in Georgia elections.

All documentation from this examination was preserved and retained by the Secretary of State's examination team and is included in the appendices attached hereto.

#### METHODOLOGY

##### Request

The Georgia Secretary of State's Office received a request from 10 electors asking the office to reexamine the system currently in use pursuant to O.C.G.A. § 21-2-379.2. The Secretary of State



decided to waive the fees that would normally be required to be paid by the electors before conducting the reexamination.

### Examination Team

The examination team consisted of the following staff from the Secretary of State's Office and the Center for Election Systems at Kennesaw State University:<sup>1</sup>

Ryan Germany	General Counsel
Jessica Simmons	Chief of Staff
Chris Harvey	Elections Director
Michael Barnes	Director, <b>Center for Election Systems at Kennesaw State University</b>
Kevin Rayburn	Assistant Elections Director
John Hallman	Elections System Manager
Jansen Head	Elections Division Attorney
Brandon Phifer	Elections System Support Specialist

The examination also required the cooperation of county officials, and the examination team sincerely thanks the multiple county officials in each office that was chosen to participate for their cooperation and professionalism.

### County Selection

The examination was conducted over a **three-day period** with testing on November 27, 2017 in Muscogee County, November 28, 2017 in Richmond County, and November 29, 2017 in Bibb County. These counties were selected for their geographic diversity, varying population size, and the fact that they were not currently conducting or preparing to conduct any elections.

Approximately two weeks prior to the examination, Chris Harvey, the State Elections Director, contacted elections officials in Muscogee, Richmond, and Bibb Counties and asked for their cooperation. The counties were asked to participate in the examination, but were not given any advance directives or an explanation of how testing would be executed. One week before the examinations, the counties were contacted again to arrange specific times and locations and to notify them that the examination team would need access to all of the equipment necessary to conduct an election (DRE units, memory cards, a GEMS server, an ExpressPoll unit, power cables, voter access cards, etc.). The counties were not told how much equipment would be examined or asked to prepare any equipment in advance.

---

<sup>1</sup> At the time of the examination, Michael Barnes worked for the Center for Election Systems at Kennesaw State University. The functions of the Center have since been taken over by the Secretary of State's Office.

### Sample Size

The examination consisted of casting votes on two races for 10 individual ballots on 20 randomly selected DRE units in each of the three participating counties. The simulation tested 60 DRE machines and simulated 200 voters per county for a total of 600 total votes.

### Database and Ballot Configuration

The GEMS database used in this examination was prepared by Michael Barnes at the Center for Election Systems at Kennesaw State University (KSU) in the same manner and using the same equipment that all election databases have been prepared on for years. One contest and one question were contained on each ballot. November 8, 2016 was the date programmed as the election date in the database.

The contest on the ballot had four candidates for one office with the choices being: “George Washington,” “Thomas Jefferson,” “James Madison,” and “John Adams.” There was also the option of not making a selection for the contest.

The second election on the ballot was a “Question” with the answer options being “Yes” or “No.” There was also the option of not making a selection for the question.

### Random Generation of Selections

In order to generate random selections for this test, the examination team utilized a Microsoft Excel formula that randomly selected the responses to be voted for each of the two elections.

For the first election, the formula selected either “George Washington,” “Thomas Jefferson,” “James Madison,” “John Adams,” or “Blank” (meaning that no selection would be made in this race prior to casting the ballot).

For the second election, the formula selected either “Yes,” “No,” or “Blank” (meaning that no selection would be made in this race prior to casting the ballot).

An individual list of the randomly selected votes to be cast on each of the 20 DRE units was generated, printed, and placed with each machine before the voting process began at each county location. That process of running the random selection generated was fully documented and is contained in the attachments hereto.

The utilization of the random selection generator made it possible that the choice “Blank” would come up for both the contest and the question, thus having the voter cast a blank ballot. While casting a blank ballot (i.e. making no selections for any race) is unlikely during actual voting, the examination team left it as an option for the purposes of this exercise.

### Equipment and Setup

Upon arriving at each of the county elections offices, Jansen Head conducted a physical security inspection of the county’s voting equipment and GEMS server to ensure rules and regulations regarding security and proper storage were being met. Simultaneously, the examination team set up a stationary video camera that recorded the entire testing area for the full duration of the examination. After setting up the first camera, the examination team met with county elections staff and described testing procedures. Additionally, a second video camera was set up to record the voting and tabulation processes.

Next, the examination team asked county elections staff to randomly choose and retrieve one ExpressPoll unit, 20 DRE units, 100 voter access cards, and 20 memory cards from their inventory.

As previously mentioned, a GEMS database was prepared for this examination. County staff were asked to login to their GEMS server, and Michael Barnes installed the database and prepared 20 memory cards (one for each DRE unit).

Additionally, the ExpressPoll unit was loaded with a memory card to create the voter access cards used in this test. The ExpressPoll unit did not **contain any voter data for this examination.**

While the memory cards and voter access cards were being prepared, the county-selected DRE units were set up in full view of the stationary camera. Michael Barnes and Chris Harvey then loaded the memory cards prepared from the county GEMS server into each DRE and ran a diagnostic test to check each unit’s card reader and printer. (All machines tested in this examination passed both diagnostic tests). A “zero tape” was then printed on each DRE and left attached to the unit, reflecting that the DREs did not have any votes cast on them for this election at that time. Finally, all compartments were locked on the DRE units as they would be on a normal election day.

Please note that all DRE units were configured in “Election Mode” for this examination.

### Casting Votes

John Hallman cast all votes on each DRE unit and was assisted and witnessed by Jansen Head. As he approached each DRE unit, John announced the serial number and Jansen recorded it. For each ballot cast, John inserted a voter access card into the DRE unit and announced the selections he was making in the two races based solely on what the Excel formula previously randomly selected.

He said the selections aloud, and Jansen witnessed and recorded the choices made. Once Jansen confirmed John's selections against the formula selected choices, John said, "casting ballot," and Jansen confirmed "cast ballot." The ballot was then cast.

There were ten ballots cast in this manner on each of the 20 DRE units at each county.

### Closing Procedures and Tabulating Results

After all votes were cast, Michael Barnes and Chris Harvey conducted the closing procedures on each DRE unit. This consisted of printing results tapes and removing the memory cards from each unit. The tapes from each DRE unit, the forms completed by Jansen Head as each vote was cast, and images of each ballot cast were secured in a separate envelope for each DRE unit.<sup>2</sup>

The 20 DRE memory cards were then uploaded into the GEMS server using a DRE unit attached to the GEMS server. The votes from each memory card were tabulated and a final report from GEMS was created and printed. Additionally, all ballot images from the 20 DRE units were printed for each ballot cast.

After concluding tabulation, the examination team released all election equipment back to county elections staff members to re-seal and secure in accordance with state law, State Election Board Rules, and individual election office protocols.

## **FINDINGS**

In three different counties, on three different days, using three different sets of DRE units, 600 randomly selected votes were cast using a GEMS database created as it would be for all elections in Georgia. In all instances, the ballot images, DRE tapes, and GEMS reports showed that all votes cast were accurately recorded and preserved on each DRE unit. Additionally, every action of equipment setup, voting, and tabulating was recorded by videotape and documented to ensure that results were properly documented for comparison to final results.

1. Each DRE unit produced a printed tape record of the ten votes cast on each unit that exactly matched the votes cast as confirmed by a witness and video recording.
2. Each DRE unit produced "ballot images" that could be matched back to each ballot cast. There were two votes per ballot. However, ballot images were produced in random order and therefore would not have been attributable to a specific voter even if one were to know the exact order that individuals voted on a specific DRE unit.

---

<sup>2</sup> All documentation from this examination was preserved and retained by the Secretary of State's examination team and is included in Appendix A for Muscogee County, Appendix B for Richmond County, and Appendix C for Bibb County.

Nor received yet.



3. Each DRE memory card was uploaded into GEMS and produced the same results as were displayed on each DRE printed tape, which also matched the record of votes cast by the examination team.
4. Each election tabulation report (election totals) produced by GEMS matched the total of each of the twenty DRE units used in the examination in each county.

### **CONCLUSION**

In summary, in a mock election with randomly selected votes, conducted on randomly selected equipment in three separate counties, on three separate days, with DREs functioning in “election mode” and with a GEMS database created with the same equipment that produces GEMS databases for actual Georgia elections, there was an exact and perfect reporting of all votes cast on sixty different DRE devices. Based on these results, the examination team finds that the examined system can be safely and accurately used.