

September 19, 2017

Supervising and Managing Elections in Prince George’s County Precinct 17-01, 90100, State of Maryland: On the Transition from DREs to Voter-Marked Ballots and Precinct-Based Scanners.

I serve as the Republican/Unaffiliated Chief Election Judge at Precinct 17–01 in Prince George's County, Maryland. In Maryland, a bipartisan pair of “Chief Judges” supervises and manages the polling place on Election Day. I believe Georgia refers to these poll workers as “Supervisors.”

I have been serving in this precinct since 2004. At that time, Maryland used Diebold’s AccuVote Touchscreen Direct Recording Electronic (AV-TS DRE) voting machines, the same voting equipment that I understand Georgia uses. I supervised 11 elections in Precinct 17-01 using that equipment.

In 2016 Maryland switched to voter-marked paper ballots scanned by ballot scanners in the precinct. I have supervised two elections using paper ballots scanned by the new equipment.

The experience in my precinct is that the ballot-scanning system is far easier and faster to set up, manage, and close than the previous DRE equipment was. Election results are available just a few minutes after the polls close. Voters can vote more quickly when they are hand-marking a paper ballot, which eliminates long lines. Voters and election officials were pleased with the new equipment and the elections generally went smoothly throughout the state.

Election morning set-up

After the switch to paper ballots in 2016, it was far easier to set up the equipment on Election Day morning and to open the polls on time.

Under Maryland’s procedures, setting up the DREs required 43 steps to be performed for each DRE, as detailed in the election judge's manual. Our polling place had at least 11 and as many as 17 DREs deployed there, depending on anticipated turnout. This means that **setting up the DREs for an election required 473 to 731 steps** before opening the polling place.

Setting up the ballot-scanning equipment and accessible ballot-marking devices requires 32 steps to be performed for each ballot scanner and 18 steps to set up the ballot-marking devices, as detailed in the election judge's manual. Our polling place has one or two ballot scanners and one ExpressVote Ballot-Marking Device (BMD). This means that **setting up the equipment for a paper-ballot-based election requires 50 to 82 steps** before opening the polls.

Closing the polling place

After switching to paper ballots in 2016, it was far easier to close down the equipment on Election Night and to obtain election results quickly.

Closing down the DREs required 51 steps to be performed for each DRE as detailed in the election judge's manual. Workers were required to print multiple copies of results tapes of each of the 11-17 DRE machines and then go through the cumbersome and time consuming process of shutting down, securing, and aggregating the results from each machine. **Obtaining the election results and closing the DREs required 561 to 867 steps.**

Closing down the ballot-scanning equipment and accessible ballot-marking devices requires 29 steps to be performed for each of the one or two ballot scanners and 9 steps for the one ballot-marking device in our precinct as detailed in in the election judge's manual. **Obtaining election results and closing down the equipment for a paper-based election requires 38 to 67 steps.**

Faster election results

During the time Maryland used DREs, precinct results in my county generally were not available until one or two hours after the polls closed. In contrast, precinct results from the ballot scanners in my precinct were available 15 to 20 minutes after the polls closed in the two elections where we have used paper ballots and ballot scanners.

Maryland's State Elections Administrator Linda Lamone reported to the State Board of Elections at its December 15, 2016 meeting that "Election night results reporting also went well, with the last counties reporting at 12:45 am on November 9th. This is an improvement on the previous voting system." See: http://www.elections.maryland.gov/pdf/minutes/2016_12.pdf (bottom of page 2)

Poll watchers from candidates and parties expressed to me that they are very pleased with the quick results. Poll watchers are required to be inside the polling place at closing time and remain there during poll closing to await the election results. In the past, many became impatient during the lengthy poll-closing procedures of the DREs. Now they have the results within a few minutes after the polls close.

My experience in the polling place on Election Day during both the Primary and General Elections in 2016 was that everything went smoothly. Media reports corroborated this statewide. See: https://www.washingtonpost.com/local/md-politics/marylands-new-voting-machines-debut-with-few-reported-glitches/2016/04/27/cc031eb4-0c87-11e6-bfa1-4efa856caf2a_story.html

Security

In my role in supervising the polling place, I found it far easier to monitor the physical security of the ballot scanning system than the DRE system.

With the DREs, each voter was left unattended at a voting machine for the amount of time it took them to cast their ballot, which could be up to 20 or 30 minutes depending upon the length of the ballot. If a voter had wanted to access the compartment of the machine where the memory card is stored, or cast multiple ballots with forged voter access cards, or manipulate the machine in other ways, it likely would have been difficult for poll workers to detect.

In contrast, paper ballots and the ballot scanner are securely controlled, preventing anyone from accessing voted ballots or voting multiple ballots. Voters never have unattended access to the voted ballots or unvoted paper ballot stock or the ballot scanning machine. An election judge is stationed at the ballot scanner all day and supervises each voter's brief interaction with the machine.

To receive a blank paper ballot, a voter must present to the election judge their Voter Authority Card (VAC), the check-in slip printed by the e-pollbook when the voter checked in. A blank paper ballot may not be issued without a valid VAC.

Voters must give the VAC to the election judge supervising the ballot scanner before a ballot may be inserted into the scanner. A ballot may not be scanned unless accompanied by a valid VAC. The VACs are retained securely at the scanner and turned in to the county board of

elections with other critical election documents after the polls close. At poll closing the number of VACs must reconcile with the number of ballots scanned.

In contrast, the memory card compartment of the AV-TS DRE is locked with a commonly available key that is the same key used by every Diebold DRE, as well as by many other devices such as hotel minibars. This information has been widely published for many years.

Election judges were trained to periodically check the tamper-evident seals on the DRE memory card compartments throughout Election Day to ensure that they had not been tampered with. However, if we had detected tampering with any of the seals, it is not clear what would have happened. The votes already cast on the machine would have become suspect, but it might not have been possible to know whether they had been falsified. Continuing to vote on a machine with suspect votes would have simply put more votes under suspicion. But pulling a suspect machine out of use potentially would have created an equipment shortage, causing longer wait times for voters.

Despite the enormous time and attention devoted to monitoring the physical security of the DREs, I believe that this is mostly “security theater.” These precautions could not prevent or detect the most dangerous type of threat to the security of the machines: the threat of insiders or hackers tampering with the software on which the machines operate.

During the time Maryland used the Diebold AV-TS DREs, I read news reports of other states experiencing election problems that caused them to abandon and outlaw paperless electronic voting or to restrict the use of DREs to voters with disabilities who had difficulty marking a paper ballot. These states included North Carolina, California, New Mexico, Ohio, Florida, and Colorado. Virginia recently decertified all DREs used in the state:

https://www.washingtonpost.com/local/virginia-politics/virginia-scrap-touch-screen-voting-machines-as-election-for-governor-looms/2017/09/08/e266ead6-94fe-11e7-89fa-bb822a46da5b_story.html

As far as I am aware, only five states remain that use DREs statewide: Delaware, Georgia, Louisiana, New Jersey, and South Carolina. See: <https://www.verifiedvoting.org/verifier>

I have read news reports that Delaware plans to replace its voting system soon. See <http://delawarepublic.org/post/delaware-send-bids-new-voting-equipment>

Little Likelihood of Voter Confusion or Inconvenience

Voters have expressed to me that they were very happy with the new paper balloting equipment. Based on my experience, I would foresee no likelihood of confusion on the part of voters if they were required to switch from using DREs to marking paper ballots.

Before the 2016 elections, Maryland’s State Board of Elections had planned to spend \$1.8 million on a voter outreach campaign to inform voters about the switch to our new voting system. But the budget for this outreach was not approved, so they were able to do only free outreach to the public via a few news stories and public events.

When the Board of Public Works, which approves state contracts, denied the funding, Lieutenant Governor Boyd Rutherford, sitting in for the governor, said he was voting against it because “I guess I just think people are smart.” See <http://marylandreporter.com/2015/06/23/lt-governor-scolds-bureaucrats-on-spending-for-land-budget-cushions/> (last section of article)

Election officials were concerned that voters would be confused by marking paper ballots. But my experience was that voters in the precinct where I worked were very comfortable with marking paper ballots. Most had completed standardized tests or been in similar situations where they indicated choices by filling in ovals. Our election judges informally polled voters about their experience with the new voting system while we gave them their “I voted” stickers as they exited the polling place. The comments were overwhelmingly positive.

Many voters also expressed more confidence that their vote would be counted accurately with the paper ballots, and appreciated the ability to do meaningful recounts, which the DREs were not able to provide.

Wait Times and Ballot-Marking Devices

Most said voting went faster and they appreciated not having to wait in long lines. In previous elections with our DREs we had documented **wait times as long as 105 minutes** to check in at our polling place.

With the paper ballots and ballot scanners we experienced **wait times no longer than 10 minutes** at the check-in table.

Maryland still offers a touchscreen interface, the ES&S ExpressVote Ballot-Marking Device (BMD), for voters with disabilities or any other voter who prefers to use it to mark a paper ballot. This uses a voter interface similar to the DREs but it does not store or tabulate votes, it simply marks a paper ballot that can be inserted into the ballot scanner.

Maryland has considered using the ExpressVote BMDs for all voters to mark their ballots during early voting. I believe this is what Georgia is piloting as well. Maryland recently requested comments from the county election directors throughout the state about this proposal. All but one county **oppose widespread use of the BMDs** for the following reasons:

- 1) The ExpressVote BMD is limited to seven candidates per screen. Contests with more than 7 candidates require the voter to navigate to additional screens. This disadvantages candidates who do not appear on the first screen. Some candidates threatened to sue.
- 2) Voters were confused by navigating between multiple screens in the same contest versus moving to the next contest, and required more assistance and instruction than voters who were marking paper ballots by hand.
- 3) Voters did not understand that the BMD was not storing or recording their votes, and that they had to take the paper print-out to the scanner in order to cast their votes.
- 4) Voters took far longer to vote using the BMD than to mark a paper ballot by hand. This caused lines of people waiting to use the BMD.
- 5) It is far more expensive to equip polling places with BMDs than with paper ballots and voting booths. Counties did not feel the extra expense was justified.

At Maryland’s State Board of Elections meeting on August 25, 2017, several of our county election directors testified that it takes longer for voters to use the ExpressVote BMD than to mark a paper ballot by hand. For this and other reasons, they oppose the expanded use of BMDs, which Maryland has been considering using for all voters during early voting. See http://www.elections.state.md.us/about/meeting_materials/August_2017.pdf (page 22)

I do not want to conduct early voting using BMDs as the only source of voting. There are many issues that warrant concern and I don't believe they can be resolved prior to June 2018 (i.e. electrical requirements, procuring/leasing additional BMD's and printers, training Election Judges to select the correct ballot style on the screen if printers aren't available, line management [it takes voters more time to vote], the candidate navigation issue, etc.) — Alisha Alexander, Election Director, Prince George's County, MD

See also the audio recording of the meeting with testimony from additional county election directors:

<http://www.elections.state.md.us/about/audio/State%20Board%20of%20Elections%202017-8-24.mp3>

Approximate time stamp 71:45:

Board member Kelley Howells: "Did I hear you correctly that when people use the ballot-marking device it takes longer to vote?"

Harford County Election Director: "Yes. It's slower."

Approximate time stamp 76:30:

Board Chair David McManus: "So what you're saying is you want to use as few of these machines as you can get away with?"

Harford County Election Director: "Right."

Approximate time stamp 79:00 to 80:30

Wicomico County Election Director testifies about long waits for BMD and potential disenfranchisement of voters who don't have time to wait.

Polling place physical facilities

While the physical layout inside our polling place has changed, the new ballot marking and ballot scanning equipment is easily accommodated in the same space as our old DRE system.

The brightly lit, upright screens of the DREs made voter privacy concerns important in the previous polling place layout. DREs had to be carefully positioned to provide voters with as much privacy as possible to prevent other voters from seeing their votes.

In contrast, paper ballots are marked flat in a booth or on a table behind a privacy screen where the voter's body tends to block the view of anyone walking by. Booths can be placed closer together without risk of compromising voters' privacy.

The need for the DREs to have their power cords "daisy-chained" to each other and plugged into a wall outlet limited the area within the room where the DREs could be placed. We had to position them near the outer walls of the room with access to power outlets.

In contrast, we can position our free-standing voting booths anywhere in the room that is convenient for us. We cluster them back to back in the center of the room where they occupy a much smaller footprint than the DREs used to. This leaves us space at the outer edges of the room for tables with privacy screens if needed for overflow. With the DREs we had no options for expansion to accommodate times of peak demand, but the paper ballots allow greater flexibility in meeting changing needs throughout Election Day.

Our scanners are plugged in at the far end of the room near the back door of the room. This allows a new traffic flow pattern in which voters exit the room after putting their ballots into the scanner. Previously, voters who had finished voting had to walk back past voters who were marking their ballots, potentially compromising their privacy.

Our ballot-marking device is plugged in behind the check-in tables near the Chief Judges' table to enable us to instruct and assist voters in using it. Previously we had to assist disabled voters at one of the DREs plugged into the daisy chain of other DREs. This new placement enables us to continue our other duties while the voter is voting while still remaining nearby in case the voter needs further assistance.

I am not aware of any precincts in Maryland having to be relocated because of space considerations in using the ballot-scanning system and cannot imagine a circumstance under which that would be required. In my experience, the ballot-scanning system is more compact and allows greater flexibility in the arrangement of the room than the DRE system did.

In summary, I believe Georgia would find that paper ballots and ballot scanners are a fast, convenient, secure, and inexpensive way to vote. Ballot scanners simplify poll opening and closing and produce election results quickly. Accessible Ballot-Marking Devices are an effective tool for voters who have difficulty marking paper ballots by hand, but they cause unnecessary time and expense when used by all voters in an election.

With greatest respect and appreciation for your service to the voters of Georgia,

Rebecca Wilson

Chief Election Judge, Prince George's County Precinct 17-01

Maryland