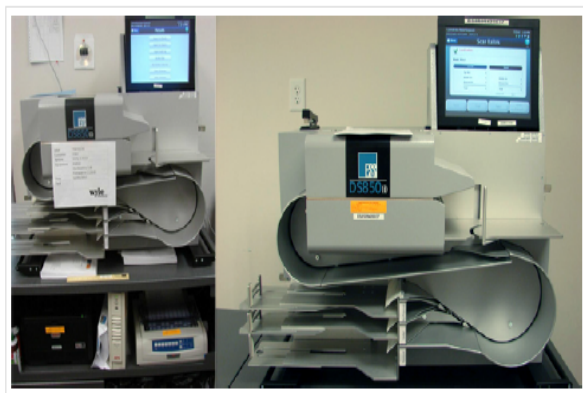I apologize for this letter going in so many directions. I will try to keep it tied together as best as I can. The scam was designed to be really complex so the trail couldn't be pieced together. The really disturbing part is that this is all technically legal. Even the fact that the machines don't work like they are supposed to (which is fully disclosed) doesn't stop them from being implemented. The Florida statues for elections and audits are also very unsettling. So even if they do declare an audit it won't matter because the fix is in for that process as well. This is focused on Broward County but applies to every county that uses these devices. Here it goes.....

Broward County uses three different kinds of voting machines, the DS200, DS850 and Express Vote. All three are made by Election Systems and Software (ES&S). This spreadsheet shows which counties use each machine. Different machines are used in the same county for early, absentee and election day voting.

DS850 VOTING MACHINE. The ES&S DS850 is a high-speed, digital scan central ballot counter. During scanning, the DS850 prints a continuous audit log to a dedicated audit log printer and can print results directly from the scanner to a second connected printer. The scanner saves results internally and to results collection media that officials can use to format and print results from a PC running Election Reporting Manager. The DS850 has an optimum throughput rate of 400 ballots per minute and uses cameras and imaging algorithms to image the front and back of a ballot, evaluate the results and sort ballots into discrete bins to maintain continuous scanning.

IMPORTANT Over-Votes: If a voter casts votes for more than the allowable number of candidates in a contest or cast votes for and against an issue in a contest. Over-voted races cannot be counted. In jurisdiction using a central count voting method there is no way for a voter to be notified of an overvote so be very careful to vote for only the allowable number of candidates in any contest (in most cases one). If you do accidentally over-vote and you have not put your ballot into the ballot box, you can request a new ballot from an election official. You will be asked to sign a Spoiled Ballot Affidavit. You may "spoil" up to two ballots and receive another (three ballots total). Once you drop your ballot in the ballot box, no changes can be made.

Verified Voting

Home › Resources › Voting Equipment › Election Systems and Software (ES&S) › Election Systems and Software (ES&S) DS850

Election Systems and Software (ES&S) DS850

The ES&S DS850 is a high-speed, digital scan central ballot counter. During scanning, the DS850 prints a continuous audit log to a dedicated audit log printer and can print results directly from the scanner to a second connected printer. The scanner saves results internally and to results collection media that officials can use to format and print results from a PC running Election Reporting Manager. The DS850 has an optimum throughput rate of 400 ballots per minute and uses cameras and imaging algorithms to image the front and back of a ballot, evaluate the results and sort ballots into discrete bins to maintain continuous scanning.

Verified Voting

Making selections
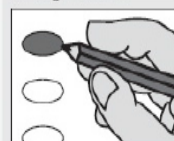
Fill in the oval to the left of the name of your choice. You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

Polling Place Voting Instructions

1. A poll worker will issue a paper ballot and direct you to a voting booth.

2. To select your candidate, use a pen to fill in the oval beside the candidate's name you wish to choose.

3. After completing your ballot, check over each race to make sure you have marked the ballot as you intended. If you make a mistake, simply ask the poll worker for another ballot.

4. When finished making your choices, place your ballot in the ballot box. All ballots in your county will be counted at a central location after the polls close. Because your ballot is counted after you leave the polling place, you will not be alerted of any over-votes or under-votes.

IMPORTANT Over-Votes: If a voter casts votes for more than the allowable number of candidates in a contest or cast votes for and against an issue in a contest. Over-voted races cannot be counted. In jurisdiction using a central count voting method there is no way for a voter to be notified of an overvote so be very careful to vote for only the allowable number of candidates in any contest (in most cases one). If you do accidentally over-vote and you have not put your ballot into the ballot box, you can request a new ballot from an election official. You will be asked to sign a Spoiled Ballot Affidavit. You may "spoil" up to two ballots and receive another (three ballots total). Once you drop your ballot in the ballot box, no changes can be made.

An ES&S Demonstration Video of the DS850 can be viewed here.

EXPRESS VOTE VOTING MACHINE: The ExpressVote is a universal vote capture device with an Independent voter-verifiable paper record that is digitally scanned for tabulation by the DS200 or the DS850. This system combines paper-based voting with touch screen technology. The ExpressVote includes a mandatory vote summary screen that requires voters to confirm or revise selections prior to printing the summary of ballot selections using the internal thermal printer. Once printed, ES&S ballot scanners process the vote summary card. The ExpressVote can serve all voters, including those with special needs, allowing voters to cast ballots autonomously. ES&S has fully integrated the ExpressVote with the existing suite of ES&S voting system products. The ExpressVote capture device was certified to the 2005 Voluntary Voting Systems Guidelines by the Election Assistance Commission on July 2, 2014 as part of the ES&S EVS 5.2.0.0 voting system. The ExpressVote includes a touchscreen display, an audio-tactile interface, and an integrated card reader and printer. The audio-tactile interface includes three assistive technologies – two position switches and a keypad. The ExpressVote system was designed to

accommodate voters in the general voting population, including voters with cognitive, dexterity, auditory and visual impairments.

Once the ballot has been marked and is provided to the voter, the ExpressVote clears its internal memory and the paper ballot is the only lasting record of the voting selections made. The voter may visually confirm his or her selections, or the ballot may be re-inserted into the machine and the voter selections summary report will provide an audio summary for voters with visual impairments. The voter proceeds to enter the ballot into the DS200 or a secured ballot box to be hand tabulated by election inspectors after the polls have closed. Ballots marked using the ExpressVote also may be tabulated using the DS850.

Serious design flaw in ESS ExpressVote touchscreen: "permission to cheat"

SEPTEMBER 14, 2018 BY ANDREW APPEL

Kansas, Delaware, and New Jersey are in the process of purchasing voting machines with a serious design flaw, and they should reconsider while there is still time! Over the past 15 years, almost all the states have moved away from paperless touchscreen voting systems (DREs) to optical-scan paper ballots. They've done so because if a paperless touchscreen is hacked to give fraudulent results, there's

no way to know and no way to correct; but if an optical scanner were hacked to give fraudulent results, the fraud could be detected by a random audit of the paper ballots that the voters actually marked, and corrected by a recount of those paperballots.

But here's the amazingly bad feature: "The version that we have has an option for both ways," [Johnson County Election Commissioner Ronnie] Metsker said. "We instruct the voters to print their ballots so that they can review their paper ballots, but they're not required to do so. If they want to press the button 'cast ballot,' it will cast the ballot, but if they do so they are doing so with full knowledge that they will not see their ballot card, it will instead be cast, scanned, tabulated and dropped in the secure ballot container at the backside of the machine."

Now it's easy for a hacked machine to cheat undetectably! All the fraudulent vote-counting program has to do is wait until the voter chooses between "cast ballot without inspecting" and "inspect ballot before casting". If the latter, then don't cheat on this ballot. If the former, then change votes how it likes, and print those fraudulent votes on the paper ballot, knowing that the voter has already given up the right to look at it.

Verified Voting

Election Systems and Software (ES&S) ExpressVote

The ExpressVote is a universal vote capture device with an independent voter-verifiable paper record that is digitally scanned for tabulation by the DS200 or the DS850. This system combines paper-based voting with touch screen technology. The ExpressVote includes a mandatory vote summary screen that requires voters to confirm or revise selections prior to printing the summary of ballot selections using the internal thermal printer. Once printed, ES&S ballot scanners process the vote summary card. The ExpressVote can serve all voters, including those with special needs, allowing voters to cast ballots autonomously. ES&S has fully integrated the ExpressVote with the existing suite of ES&S voting system products. The ExpressVote capture device was certified to the 2005 Voluntary Voting Systems Guidelines by the Election Assistance Commission on July 2, 2014 as part of the ES&S EVS 5.2.0.0 voting system. The ExpressVote includes a touchscreen display, an audio-tactile interface, and an integrated card reader and printer. The audio-tactile interface includes three assistive technologies – two position switches and a keypad. The ExpressVote system was designed to accommodate voters in the general voting population, including voters with cognitive, dexterity, auditory and visual impairments.

Verified Voting

Voting Process: The ExpressVote is an electronic vote capture device designed for use by all electors. It features a touchscreen display and integrated thermal printer. Voters insert a blank paper activation card in the machine. This is the ballot. Voters have several options to make candidate selections. They may touch the screen or use the moveable keypad provided. The display includes various colors and effects to guide the voter. The voter may adjust the display contrast and text size in order to read the screen. Each key on the pad has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use. Alternatively, voters may also use headphones to hear a recorded list of the instructions and candidates for each contest and then make selections by touching the screen, touching the keypad, touching a two-position switch, or through a sip/puff device. The voter may adjust the volume and tempo of the audio. The ExpressVote stores the choices in its internal memory. It can be programmed in multiple languages.

The machine provides a summary report for the voter to review his or her choices before the ballot is printed. Only the voter's choices are printed on the ballot. The phrase "No Selection" appears under any contest in which the elector did not vote. Overvotes and crossover votes cannot occur on this equipment and a voter is warned about undervotes prior to the completion of voting.

Once the ballot has been marked and is provided to the voter, the ExpressVote clears its internal memory and the paper ballot is the only lasting record of the voting selections made. The voter may visually confirm his or her selections, or the ballot may be re-inserted into the machine and the voter selections summary report will provide an audio summary for voters with visual impairments. The voter proceeds to enter the ballot into the DS200 or a secured ballot box to be hand tabulated by election inspectors after the polls have closed. Ballots marked using the ExpressVote also may be tabulated using the DS850.

A video demonstration prepared for the November 2014 election in Fairfax County VA:

ExpressVote Voting System

Another video from Fairfax County VA:
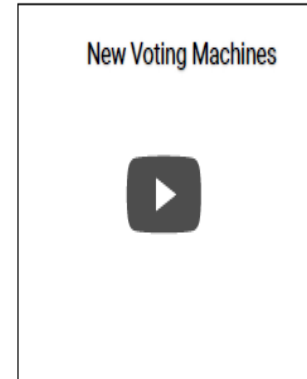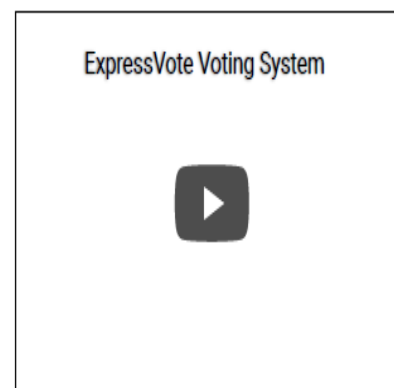
New Voting Machines

******This is the machine where the votes can easily be altered**********

DS200 VOTING MACHINE: The ES&S DS200 is a precinct-based, voter-activated paper ballot counter and vote tabulator. The DS200 possesses a 12" LCD touch screen, which is used to provide voters with feedback, such as an overvote warning. When the polls close, the ES&S DS200 prints out the voter logs so election officials can have a paper tally. Like the Hart Intercivic eScan, the Dominion ImageCast and the Premier/Diebold OSX, the DS200 captures digitized images of all ballots scanned. This allows write-in votes and problematic ballot markings to be processed using the digitized images, so that once the ballots are scanned, they need not be handled except in the event of a recount or audit.

The DS850 and ExpressVote did not have any security concerns listed in their report. Here are the security concerns for the DS200.

1) Security Seals Ideally, the DS200's exposed ports, memory card access areas, ballot box doors and case seams would be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances. Seals should be logged to maintain chain of custody of sensitive materials. (I will file a Freedom of Information Request today to get this log)

2) Ballot Box Access Optical scan systems have at least one and possible more ballot boxes. Each ballot box should be inspected by a voter at the beginning of voting to make sure that they are empty. These ballot boxes should locked and/or be sealed with tamper-evident tape.

3) The Memory Card is Sensitive Corrupt memory cards may be able to introduce viruses, cause the main election server to crash and falsify votes. Access to the memory card should be controlled, monitored and logged at all times. (I will file a Freedom of Information Request today to get this log)

4) Correct Inks Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should use the writing instrument provided at the polling place or, if voting at home, black ballpoint pen that does not bleed through paper.

5) Unresponsive Touchscreens During EAC testing on the Unity 3.2.1.0 voting system, some DS200s

stopped responding to interactions with the user interface. The anomaly presented itself at random times during the testing process. ES&S informed the EAC that the root cause of touch screen unresponsiveness is linked to an improperly implemented internal system log. This log is only accessible to ES&S technicians when troubleshooting errors with the fielded system. One specific event tracked by this log is the presence of the election media USB memory stick. If the unit is powered on without a memory stick inserted, the system records an event eight (8) times per second to the log. When the log reaches capacity, it causes a section of the internal compact flash (CF) card to become inaccessible. This same section of the CF card contains the calibration settings for the DS200's touch screen interface. When this section of the CF card is inaccessible the calibration settings are no longer available to the system so the screen becomes unresponsive.

6) Skewed Ballots During testing on the Unity 3.2.1.0, a DS200 did not count a valid mark for a race. The anomaly was discovered when county testers reviewed the printed election summary report for the DS200 unit. The count for a single contest did not match the expected results. The test was performed to verify that they have only been able to replicate this issue in testing by removing the plastic guides and physically altering the ballot

(cutting of a corner). In an effort to understand the issue the EAC focused on reviewing ballot images from several states and previous test campaigns. The review included 11", 14", 17" and 19" ballots. In the course of the review, the EAC found various degrees of ballot image distortion; ith the 17" ballot having the largest degree of skew. The EAC is working with jurisdictions, VSTLs and the manufacturer to understand and resolve this issue.

During the EAC Certification process it was revealed that a DS200 coded for Election Day counting will not support more than 18 precincts, the DS200 does not support more than 40 ballot styles in a single absentee precinct in a ballot by-style election. If an election definition contains more than 40 ballot styles, the user has to define more than one absentee precinct and then separate the ballots into groups for processing. In addition, all optical scan ballots used in a given election must be the same size and have the same position capacity, an early vote station will only support a maximum limit of 9999 precincts meaning that a large number of precincts may result in small ballot processing delays, and an early vote station will not be able to print a precinct-by-precinct report by default.

Verified Voting

Home › Resources › Voting Equipment › Election Systems and Software (ES&S) › Election Systems and Software (ES&S) DS200

Election Systems and Software (ES&S) DS200

The **ES&S DS200** is a precinct-based, voter-activated paper ballot counter and vote tabulator. The DS200 possesses a 12" LCD touch screen, which is used to provide voters with feedback, such as an overvote warning. When the polls close, the ES&S DS200 prints out the voter logs so election officials can have a paper tally. Like the Hart Intercivic eScan, the Dominion ImageCast and the Premier/Diebold OSX, the DS200 captures digitized images of all ballots scanned. This allows write-in votes and problematic ballot markings to be processed using the digitized images, so that once the ballots are scanned, they need not be handled except in the event of a recount or audit.

The DS200 is a jurisdiction-wide election tabulation system. The DS200 scanners process single or dual-sided paper ballots for up to 18 Election Day precincts and 1639 Early Voting precincts, permit programming of separate election groups for the procedural processing and storage of provisional ballots separately from Election Day totals for inclusion, after determination of voter validity, automatically prints a Zero report when the polls open, can be configured to automatically print one or more reports (Status, Race Results, Certification or Audit Log,) have a public counter that displays the number of ballots cast, store paper ballots in attached ballot storage bins (key

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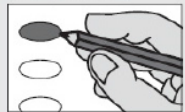
Verified Voting

Ds200 prevents access to the USB election flash drive via a key locked compartment. It prints reports including: Election Startup, Poll Closing, Diagnostic, Initial State, Audit Log, Zero and Certification and audit logging and reporting; The Ds200 operates on standard or two hour back-up battery power.

DS200 source code consists of C/C++ components. The ESSUNITY3200 baseline was modified during the Unity 3.2.1.0 EAC test effort. A total of 651 functions were changed. Each of the changed functions was reviewed by the EAC for conformance to the VVSG 2005. There were 42 instances of non-conformance reported to ES&S. ES&S submitted fixes and they were validated as resolved. None of the discrepancies were comment related. None of the discrepancies were against any of the software related VVSG 2005 requirements. The file function line count results identified no files or functions exceeded 240 eLOCs, 3.47% were between 60 and 120 lines, .23% were between 120 and 240 lines, the remaining 96.30% were less than 60 lines.

Instructions

Making selections

Fill in the oval to the left of the name of your choice. You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

❗ Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

Voting Process: After receiving your ballot from the election officer, fill in the oval located next to your selection for a candidate or choice of an issue. When you have finished filling in your ballot, you will feed your ballot into the DS200 machine.

As votes are entered, the DS200 stores the vote tallies on its internal memory card. Optional land line and wireless modems are available for the DS200. When the polls close, the DS200's internal printer prints out the precinct's vote report on paper.

Common ballot problems occur when voters vote for too many candidates in one race or when voters cast their ballots in the wrong precinct. Make sure you read your ballot carefully and understand how many candidates to vote for.

If you have a question, please ask a Poll Worker. If you make a mistake on your ballot, return it to a Poll Worker and ask for a new one. You can request up to two replacement ballots. Be sure to double

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Verified Voting

A DS200 Voting Demo produced by ES&S:

DS200 Introduction

A Voting Demo produced by Cuyahoga County OH:

Security Concerns

Security Seals Ideally, the DS200's exposed ports, memory card access areas, ballot box doors and case seams would be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances. Seals should be logged to maintain chain of custody of sensitive materials.

Ballot Box Access Optical scan systems have at least one and possible more ballot boxes. Each ballot box should be inspected by a voter at the beginning of voting to make sure that they are empty. These ballot boxes should locked and/or be sealed with tamper-evident tape.

The Memory Card is Sensitive Corrupt memory cards may be able to introduce viruses, cause the main election server to crash and falsify votes. Access to the memory card should be controlled, monitored and logged at all times.

Correct Inks Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should use the writing instrument provided at the polling place or, if voting at home, black ballpoint pen that does not bleed through paper.

Unresponsive Touchscreens[1] During EAC testing on the Unity 3.2.1.0 voting system, some DS200s stopped responding to interactions with the user interface. The anomaly presented itself at random times during the testing process. ES&S informed the EAC that the root cause of touch screen unresponsiveness is linked to an improperly implemented internal system log. This log is only accessible to ES&S technicians when troubleshooting errors with the fielded system. One specific event tracked by this log is the presence of the election media USB memory stick. If the unit is powered on without a memory stick inserted, the system records an event eight (8) times per second to the log. When the log reaches capacity, it causes a section of the internal compact flash (CF) card to become inaccessible. This same section of the CF card contains the calibration settings for the DS200's touch screen interface. When this section of the CF card is inaccessible the calibration settings are no longer available to the system so the screen becomes unresponsive.

Skewed Ballots[2] During testing on the Unity 3.2.1.0, a DS200 did not count a valid mark for a race. The anomaly was discovered when county testers reviewed the printed election summary report for the DS200 unit. The count for a single contest did not match the expected results. The test was performed to verify that

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Verified Voting

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During the EAC Certification process[3] it was revealed that a DS200 coded for Election Day counting will not support more than 18 precincts, the DS200 does not support more than 40 ballot styles in a single absentee precinct in a ballot by-style election. If an election definition contains more than 40 ballot styles, the user has to define more than one absentee precinct and then separate the ballots into groups for processing. In addition, all optical scan ballots used in a given election must be the same size and have the same position capacity, an early vote station will only support a maximum limit of 9999 precincts meaning that a large number of precincts may result in small ballot processing delays, and an early vote station will not be able to print a precinct-by-precinct report by default.

1. EAC Certified System Technical Advisory – ESS2011-02
2. EAC Certified System Technical Advisory – ESS2011-03
3. Certificate of Conformance Unity 3.2.00 Rev. 3, 2011

➕

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The President and CEO of ES&S is Tom Burt

Tom Burt Set to Become New ES&S CEO

Election Systems & Software announced today that Tom Burt will succeed Aldo Tesi as Chief Executive Officer.

Burt, the company's current President and Chief Operating Officer, will become the President and CEO on January 1, 2015. Tesi, who has been with ES&S for more than 15 years, will continue to serve ES&S as the Chairman of the Board.

"It has been my honor to be part of the ES&S team," Tesi said. "I am proud of the important role we play in election administration and the great support we give our customers. Tom Burt will do an excellent job moving ES&S forward and maintaining our trusted industry leadership position."

Burt has been with ES&S for seven years leading the company's Sales, Customer Service, Operations, Product Development departments. Before coming to ES&S, Tom held a variety of executive positions McMaster-Carr and the Gallup Organization.

Tesi became CEO of ES&S in 2000 after joining the company the previous year. Since April 2013, he has served as CEO and Chairman.

As CEO, Tesi was responsible for leading the company's overall business strategy as well as growing and delivering election solutions to st local governments in the United States and worldwide. He developed ES&S into the industry leader in overall market share and delivery c election products and services, Burt said.

"Aldo Tesi infused the elections industry with his passion for people and products," Burt said. "I look forward to building on that legacy, starting with the launch of our latest tabulation system designed to address all future voting needs."

Before joining ES&S, Tesi spent more than 30 years in the technology and service industry with IBM and First Data Corp. He held various management positions at First Data, ultimately becoming President of First Data Resources, the largest division within the corporation.

In 2014, Tesi was inducted into the Omaha Business Hall of Fame for his contributions to both ES&S and First Data.

Here are the counties (and the number of precincts within) that used the DS200 on election day.

Search Results: Florida / DS200 / 2018

FIPS code	State	Jurisdiction	Division	Precincts	Total Registratio	Make	Model	Equipment Type	VVPAT	Accessible Use	Early Voting	Absentee Ballots	Polling Plac
1200500000	Florida	Bay County		48	120518	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1200700000	Florida	Bradford County		14	16254	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1200900000	Florida	Brevard County		159	420466	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1201100000	Florida	Broward County		577	1167982	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1201300000	Florida	Calhoun County		11	8680	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1201500000	Florida	Charlotte County		67	134075	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Return
1201700000	Florida	Citrus County		31	108892	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1201900000	Florida	Clay County		47	152527	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1202100000	Florida	Collier County		60	212368	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1203100000	Florida	Duval County		44	603496	Election Systems & Software	DS200	Optical Scan	N/A	No	No	Yes	Yes
1203300000	Florida	Escambia County		79	211984	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1203500000	Florida	Flagler County		23	82283	Election Systems & Software	DS200	Optical Scan	N/A	No	No	No	Yes
1203700000	Florida	Franklin County		8	7745	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1203900000	Florida	Gadsden County		25	29734	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1204500000	Florida	Gulf County		9	10188	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1204700000	Florida	Hamilton County		8	7712	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1205100000	Florida	Hendry County		10	17692	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1205500000	Florida	Highlands County		25	59009	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1205700000	Florida	Hillsborough County		340	853119	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1205900000	Florida	Holmes County		8	10719	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1206100000	Florida	Indian River County		37	112884	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1206300000	Florida	Jackson County		14	27937	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1206700000	Florida	Lafayette County		5	4346	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1206900000	Florida	Lake County		107	234478	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1207100000	Florida	Lee County		127	443650	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1207700000	Florida	Liberty County		8	4371	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1208100000	Florida	Manatee County		70	243570	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1208300000	Florida	Marion County		125	242150	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1208500000	Florida	Martin County		30	113698	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1208600000	Florida	Miami-Dade County		767	1417738	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1208900000	Florida	Nassau County		15	66540	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1209100000	Florida	Okaloosa County		52	134895	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1209500000	Florida	Orange County		247	791680	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1209700000	Florida	Osceola County		87	217180	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1210100000	Florida	Pasco County		112	350194	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1210300000	Florida	Pinellas County		301	663409	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1210500000	Florida	Polk County		167	414885	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1211300000	Florida	Santa Rosa County		41	131862	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1211500000	Florida	Sarasota County		99	316960	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1211700000	Florida	Seminole County		80	300284	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1210900000	Florida	St. Johns County		46	186224	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1211900000	Florida	Sumter County		30	96396	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1212100000	Florida	Suwannee County		16	25755	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1212500000	Florida	Union County		8	7360	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1212700000	Florida	Volusia County		125	380261	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1212900000	Florida	Wakulla County		12	20744	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes
1213100000	Florida	Walton County		21	50007	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	No	Yes
1213300000	Florida	Washington County		16	15773	Election Systems & Software	DS200	Optical Scan	N/A	No	Yes	Yes	Yes

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Florida	Bay County	Election Systems & Software	DS850	Optical Scan	N/A	48
Florida	Bay County	Election Systems & Software	ExpressVote	Ballot Marking Device or System	N/A	48
Florida	Bradford County	Election Systems & Software	AutoMARK	Ballot Marking Device or System	N/A	14
Florida	Bradford County	Election Systems & Software	DS200	Optical Scan	N/A	14
Florida	Bradford County	Election Systems & Software	DS450	Optical Scan	N/A	14
Florida	Brevard County	Election Systems & Software	AutoMARK	Ballot Marking Device or System	N/A	159
Florida	Brevard County	Election Systems & Software	DS200	Optical Scan	N/A	159
Florida	Brevard County	Election Systems & Software	DS850	Optical Scan	N/A	159
Florida	Broward County	Election Systems & Software	DS850	Optical Scan	N/A	577
Florida	Broward County	Election Systems & Software	ExpressVote	Ballot Marking Device or System	N/A	577
Florida	Broward County	Election Systems & Software	DS200	Optical Scan	N/A	577
Florida	Calhoun County	Election Systems & Software	ExpressVote	Ballot Marking Device or System	N/A	11
Florida	Calhoun County	Election Systems & Software	DS200	Optical Scan	N/A	11
Florida	Charlotte County	Election Systems & Software	DS200	Optical Scan	N/A	67
Florida	Charlotte County	Election Systems & Software	DS850	Optical Scan	N/A	67
Florida	Charlotte County	Election Systems & Software	ExpressVote	Ballot Marking Device or System	N/A	67
Florida	Citrus County	Election Systems & Software	Expressvote	Ballot Marking Device or System	N/A	31

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All Models ▼
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2010 ANTITRUST LAWSUIT FILED BY D.O.J. AGAINST ES&S

On March 8, 2010 the U. S. Department of Justice, along with nine state attorneys general, filed an antitrust lawsuit in U. S. District Court in Washington, D.C. alleging that ES&S' 2009 acquisition of Premier harmed competition. At the same time, the DOJ filed a proposed settlement with ES&S that required the divestiture of the Premier assets to a purchaser approved by the Department. Negotiations subsequently took place between ES&S and Dominion to execute a transaction in accordance with the DOJ's proposed settlement, and the Department has reviewed and approved all aspects of the purchase agreement.

dominion | VOTING

221 Hopkins Avenue
Jamestown, New York 14701

May 19, 2010
FOR IMMEDIATE RELEASE

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Dominion Voting Systems, Inc. Acquires Premier Election Solutions Assets From ES&S

Transaction Approved by the U. S. Department of Justice, Will Significantly Increase Competition in the United States Voting Systems Industry

Dominion's Engineering and Customer Service Expertise Will Support Premier's Voting Products Throughout the U.S.

JAMESTOWN, New York .... Dominion Voting Systems, Inc. today announced that it has acquired from Premier Election Solutions, Inc. (Premier) a wholly owned subsidiary of Election Systems and Software (ES&S), the primary assets of Premier, including all intellectual property, software, firmware and hardware for Premier's current and legacy optical scan, central scan, and touch screen voting systems, and all versions of the GEMS election management system.

As part of the transaction, Dominion also acquired an irrevocable, perpetual license for the AutoMark voting terminals used by voters with disabilities, a similar license for the VoteRemote absentee vote-by-mail processing solution, and rights to spare parts, supplies and other resources necessary to support and service these installed systems. In addition, Dominion will acquire a percentage of existing Premier inventory.

Under terms of the agreement, which was approved by the U. S. Department of Justice (DOJ) and nine state attorneys general, Dominion has secured the right to hire current and former Premier employees and to enter into agreements with Premier dealers experienced in deploying and supporting these systems. In addition, the transaction requires that current Premier customers be provided with the opportunity to assign their existing contracts to Dominion without penalty. As part of the transaction, Dominion granted license rights back to Premier, subject to certain restrictions. The transaction also provides limitations on the ability of ES&S to continue to sell the Premier equipment going forward. Premier voting systems are currently in use in over 1,400 jurisdictions in 33 states and serve nearly 28 million American voters.

"We are extremely pleased to conclude this transaction, which will restore much-needed competition to the American voting systems market and will allow Dominion to expand its capabilities and operational footprint to every corner of the United States," said John Poulos, CEO of Dominion. "As a result of this acquisition, election administrators and the voters they serve will benefit from more competitive pricing, greater innovation and enhanced customer service in the American voting systems market. We are already building a nationwide customer service infrastructure to support Premier jurisdictions, enabling us to offer the expertise and product knowledge required to support these systems going forward. We will also leverage our unequaled engineering resources to continue to enhance and improve the Premier suite of products, with a particular focus on system transparency, accountability and security. Dominion's culture of transparency and engagement with all stakeholders in the elections process, including permitting public review of system source code, will be extended to the Premier product line. Today, Premier jurisdictions have an innovative, agile and engineering-driven new alternative as their solutions partner, and we are excited to get started serving their needs," Poulos added.

Included in the acquisition are Premier's legacy products as well as Premier's new ASSURE 1.2 solution suite which includes hardware, software and firmware with enhanced functionality and strengthened security and auditability features. In 2009 ASSURE 1.2 products obtained federal certification by the Election Assistance Commission under a new, and highly demanding, federal testing program. On March 8, 2010 the U. S. Department of Justice, along with nine state attorneys general, filed an antitrust lawsuit in U. S. District Court in Washington, D.C. alleging that ES&S' 2009 acquisition of Premier harmed competition. At the same time, the DOJ filed a proposed settlement with ES&S that required the divestiture of the Premier assets to a purchaser approved by the Department. Negotiations subsequently took place between ES&S and Dominion to execute a transaction in accordance with the DOJ's proposed settlement, and the Department has reviewed and approved all aspects of the purchase agreement.

About Dominion Voting Systems: Headquartered in Toronto, Ontario Canada with offices in New York, Colorado and California, Dominion Voting Systems provides comprehensive voting solutions that emphasize security, accessibility and transparency at every step of the elections process. Dominion's solutions are currently in use by over 400 jurisdictions in the U.S. and Canada, including 52 counties in the State of New York. Some 90,000 Dominion ImageCast Precinct Optical Scan Tabulators have been successfully deployed in elections around the world. For information visit: www.dominionvoting.com.

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Transaction Approved by the U. S. Department of Justice, Will Significantly Increase Competition

in the United States Voting Systems Industry Dominion's Engineering and Customer Service Expertise Will Support Premier's Voting Products Throughout the U.S.JAMESTOWN, New York .... Dominion Voting Systems, Inc. today announced that it has acquired from Premier Election Solutions, Inc. (Premier) a wholly owned subsidiary of Election Systems and Software (ES&S), the primary assets of Premier, including all intellectual property, software, firmware and hardware for Premier's current and legacy optical scan, central scan, and touch screen voting systems, and all versions of the GEMS election management system.

HERE IS THE COMPANY INFORMATION AND CEO AND PRESIDENT FOR DOMINION VOTING SYSTEMS

DOMINION DEMOCRACY SUITE IS a paper-based optical scan voting system consisting of three components: ImageCast Precinct, a precinct-based optical scan ballot tabulator, ImageCast Evolution, precinct scanner with optional ballot marking capabilities, and ImageCast Central, a high-speed, central ballot scan tabulator based on Commercial off the Shelf (COTS) hardware.

SECURITY CONCERNS

1) Security Seals The ImageCast 's exposed ports, memory card access areas, ballot box doors and case seams should be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances.

2) Ballot Box Access The ImageCast scanner has one ballot box with separate sections, one which receives ballots containing write-in votes. Each ballot box should be inspected by poll workers at the beginning of voting to make sure that they are empty. These ballot boxes should be locked and/or be sealed with tamper-evident tape and appropriate entries made in chain of custody logs. (I will file a Freedom of Information Request today to get this log)

3) Memory Cards are Sensitive Corrupt memory cards may introduce viruses, cause the scanner of main election server to crash, cause other problems that can result in incorrect vote tallies. Access to the memory card should be controlled, monitored and logged at all times. Tamper evident seals should cover access to memory cards and other ports, with entries recording the seal numbers made in chain of custody logs whenever seals are removed or reattached. (I will file a Freedom of Information Request today to get this log)

4) Correct Inks for Marking Ballots Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should only use the writing instrument provided at the polling place.

Home › Resources › Voting Equipment › Dominion Voting Systems › Dominion ImageCast Democracy Suite

Dominion ImageCast Democracy Suite

The **Dominion Democracy Suite** is a paper-based optical scan voting system consisting of three components: **ImageCast Precinct**, a precinct-based optical scan ballot tabulator, ImageCast Evolution, precinct scanner with optional ballot marking capabilities, and **ImageCast Central**, a high-speed, central ballot scan tabulator based on Commercial off the Shelf (COTS) hardware.

The ImageCast Precinct ballot scanner and vote tabulator that is used in conjunction with ImageCast compatible ballot storage boxes. The system is designed to scan marked paper ballots, interpret voter marks on the paper ballot and store and tabulate each vote from each paper ballot. The ICP contains a small touch-screen LCD to allow the poll worker to access diagnostic and configuration settings. In addition, enhanced accessibility voting may be accomplished via optional accessories connected to the ImageCast unit. The ICP utilizes an Audio-Tactile Interface (ATI) device to allow voters with disabilities to navigate and submit a voted ballot. This is accomplished by presenting the ballot to the voter in an audio format. The ATI is connected to the tabulator, and allows the voter to listen to an audio voting session consisting of contest and candidate names. The ATI also allows a voter to adjust the volume and speed of audio playback.

visually through the integrated LCD display or audibly via integrated headphones); and upon the voter's acceptance, deposit the ballots into the secure ballot box. The unit also features an Audio Tactile Interface (ATI) which permits voters who cannot negotiate a paper ballot to generate a synchronously human and machine-readable ballot from elector-input vote selections.

The ATI can also accept input from sip and puff and other personal assistive technologies. In this sense, the ImageCast Evolution acts as a ballot marking device. The ImageCast Evolution has a small LCD display screen to provide voters with feedback such as an overvote warning. There are two buttons, a square red button labeled "Return" and an oval green button labeled "Cast" that the voter uses to instruct the machine to return or cast ballots with errors, such as overvotes or ambiguous marks. When the polls close, the ImageCast prints out the race results and other information on a paper tape.

The **ImageCast Central** is a high-speed, central ballot scan tabulator using a Canon DR-X10C Scanner (pictured) or higher volume Canon DR-7550C, coupled with the custom-made ballot processing application software. It is used for high speed scanning and counting of paper ballots.

Voting Process:

1. The pollworker will give you a ballot specific to your district. The scanner will be able to distinguish what district the ballot is for by the timing marks on the edge of the printed ballot. You may also receive a privacy sleeve.

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wheelchair accessible.

4. When you have finished marking selections and reviewing your ballot, insert the completed ballot into the ImageCast scanner. If the ballot has been completely voted and the ovals are filled in correctly, the scanner will automatically cast the ballot.

5. While the scanner will notify you if you have over-voted, it will accept under-votes when all the contests or ballot questions have not been voted on. If there are ballot discrepancies, or the scanner can not read the ballot, the LCD screen will alert you to the error and/or the ballot will be returned.

A Voting Demo produced by Warren County NY:

A Demo of Poll Opening and Closing:

Using the new Optical Scan V... [▶]

Powering up and down the V... [▶]
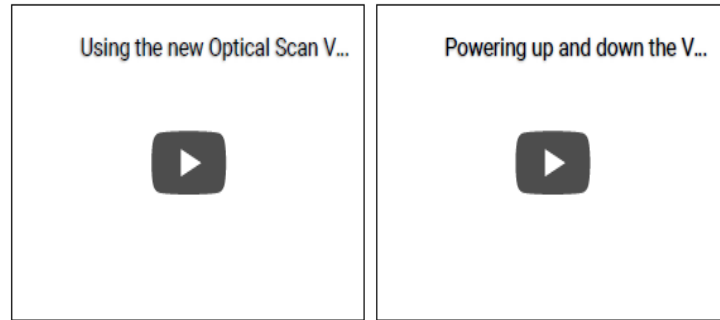
Security Concerns

Security Seals The ImageCast 's exposed ports, memory card access areas, ballot box doors and case seams should be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances.

Ballot Box Access The ImageCast scanner has one ballot box with separate sections, one which receives ballots containing write-in votes. Each ballot box should be inspected by poll workers at the beginning of voting to make sure that they are empty. These ballot boxes should be locked and/or be sealed with tamper-evident tape and appropriate entries made in chain of custody logs.

Memory Cards are Sensitive Corrupt memory cards may introduce viruses, cause the scanner of main election server to crash, cause other problems that can result in incorrect vote tallies. Access to the memory card should be controlled, monitored and logged at all times. Tamper evident seals should cover access to memory cards and other ports, with entries recording the seal numbers made in chain of custody logs whenever seals are removed or reattached.

Correct Inks for Marking Ballots Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should only use the writing instrument provided at the polling place.

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VERIFIED VOTING BLOG: DESIGN FLAW IN DOMINION IMAGECAST EVOLUTION VOTING MACHINE

The Dominion ImageCast Evolution looks like a pretty good voting machine, but it has a serious design flaw: after you mark your ballot, after you review your ballot, the voting machine can print more votes on it!. Fortunately, this design flaw has been patented by a rival company, ES&S, which sued to prevent Dominion from selling this bad design. Unfortunately, that means ES&S can still sell machines (such as their ExpressVote all-in-one) incorporating this design mistake.

This appears to be an elementary security-design mistake. Security design isn't easy! A good security designer has to be able to think adversarially, to understand the threat model, to understand how the software could subvert the hardware. In this case, the threat is:

1) Hacker exploits a security vulnerability of the ImageCast voting machine or on the election-administration laptop computer that prepares ballot files. For example, the ImageCast has several USB ports, and USB is notoriously insecure.

2) Hacker uses this vulnerability to install additional software on the ImageCast, that fills in additional ovals on the op-scan ballot, after the voter has inserted it for scanning. For extra credit, don't perfectly fill in the ovals like a BMD normally would; instead, mimic the style that the voter has used with a pen. For double-extra-credit, do this only when the scanner detects that the voter has used a similar color pen to the ink-jet cartridge in the BMD's printer. For triple-extra-credit, only fill in ovals in races where the voter hasn't already marked a vote, this avoids overvotes that would draw attention to the paper ballot during an audit or recount.

Verified Voting

Home https://www.verifiedvoting.org/ Dominion ImageCast Evolution voting machine | Andrew Appel

Verified Voting Blog: Design flaw in Dominion ImageCast Evolution voting machine | Andrew Appel

Oct 17 2018 » Andrew W. Appel

This article was originally posted at Freedom to Tinker on October 16, 2018.

The Dominion ImageCast Evolution looks like a pretty good voting machine, but it has a serious design flaw: *after you mark your ballot, after you review your ballot, the voting machine can print more votes on it!* Fortunately, this design flaw has been patented by a rival company, ES&S, which sued to prevent Dominion from selling this bad design. Unfortunately, that means ES&S can still sell machines (such as their ExpressVote all-in-one) incorporating this design mistake.

When we use computers to count votes, it's impossible to absolutely prevent a hacker from replacing the computer's software with a vote-stealing program that deliberately miscounts the vote. Therefore (in almost all the states) we vote on paper ballots. We count the votes with optical scanners (which are very accurate when they haven't been hacked), and to detect and correct possible fraud-by-hacking, we recount the paper ballots by hand. (This can be a full recount, or a *risk-limiting audit,* an inspection of a randomly selected sample of the ballots.)

Some voters are unable to mark their ballots by hand–they may have a visual impairment (they can't see the ballot) or a motor disability (they can't physically handle the paper). Ballot-marking devices (BMDs) are provided for those voters (and for any other voters that wish to use them); the BMDs are equipped with touchscreens, and also with audio and tactile interfaces (headphones and distinctively shaped buttons) for

In a typical polling place, there are cardboard privacy screens for those voters who use a pen to fill in the the bubbles on their op-scan ballots; one BMD for voters who want machine assistance marking their ballots; and one optical scanner into which all voters deposit their ballots.

In contrast, the ImageCast Evolution is an "all-in-one" device: combination BMD and optical scanner. Most voters fill out their ballots by hand, and insert into the scanning slot. But those using the BMD feature will insert a *blank* ballot into the scanning slot; after they indicate their choices using the touchscreen or audio/button interface, the ImageCast Evolution will fill in the bubbles on their ballot for them.

**ImageCast Evolution (ICE)
Ballot Marker and Tabulator**
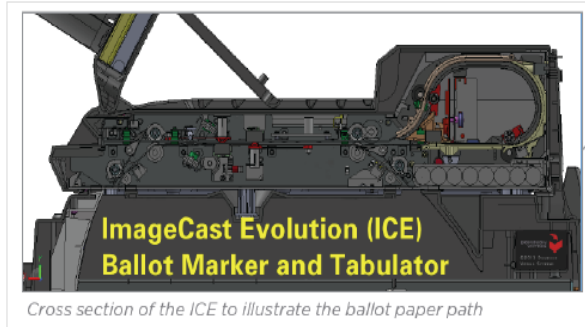
Cross section of the ICE to illustrate the ballot paper path

Combining the BMD+scanner is a really bad idea! Remember, the purpose of the paper ballot is to guard against cheating by hacked voting computers. If the optical-scanners have been hacked, they lie about what's on the paper ballots. We can detect this fraud by recounting a random sample of the paper ballots. But the ImageCast Evolution can print right onto your ballot, after you insert it into the slot. From the diagram of the paper path, above, it's pretty clear that the same bidirectional paper path contains both the scanner and the printer. **That means *it can cast more votes onto your ballot.*** Of course, the legitimate software installed by Dominion won't do that, but the machine is physically capable of it, and fraudulent software can exploit this ability.

When I feed my marked ballot into an optical scanner, *I do not want the optical scanner to have the ability to fill in more bubbles on my ballot!* The whole purpose of the paper ballots, and the human-inspection random audits, and the human-inspection recounts, is to guard against the possibility that a hacker installed cheating software into the voting machine. If the cheating software can mark my ballot, *after* the last time I can inspect it, then *the ballot seen by the recount team is not the same as I marked it.*

This appears to be an elementary security-design mistake. Security design isn't easy! A good security designer has to be able to think adversarially, to understand the threat model, to understand how the software could subvert the hardware. In this case, the threat is:

1. Hacker exploits a security vulnerability of the ImageCast voting machine *or* on the election-administration laptop computer that prepares ballot files. For example, the ImageCast has several USB ports, and USB is notoriously insecure.
2. Hacker uses this vulnerability to install additional software on the ImageCast, that fills in additional ovals on the op-scan ballot, after the voter has inserted it for scanning. For extra credit, don't perfectly fill in the ovals like a BMD normally would; instead, mimic the style that the voter has used with a pen. For double-extra-credit, do this only when the scanner detects that the voter has used a similar color pen to the ink-jet cartridge in the BMD's printer. For triple-extra-credit, only fill in ovals in races where the voter hasn't already marked a vote, this avoids overvotes that would draw attention to the paper ballot during an audit or recount.

DELAWARE PATENT SUIT PITS TOP TWO PLAYERS IN U.S. ELECTRONIC VOTING MACHINES AGAINST EACH OTHER ARPIL 21, 2017

Yet a March 2017 election technology industry report sponsored by the Penn Wharton Public Policy Initiative identifies Election Systems and Dominion Voting as two of three firms which dominate the sector; collectively, **Election Systems and Dominion Voting cover more than 80 percent of the vendor marketplace by percentage of eligible voters.**

IPWatchdog®

Delaware Patent suit pits top two players in U.S. electronic voting machines against each other

By Steve Brachmann
August 29, 2017

🖨 Print Ar
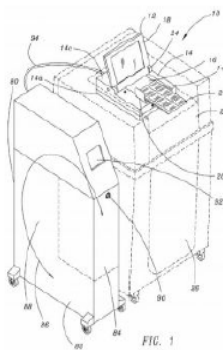
On Monday, August 21st, Omaha, NE-based voting machine firm Election Systems & Software filed a patent infringement suit against election product company Dominion Voting Systems of Toronto, Ontario. Election Systems is asserting a patent on an electronic voting machine technology that provides multiple methods by which a user may cast a vote in an effort to improve accessibility. The suit has been filed in the District of Delaware.

Election Systems is asserting a single patent in the case: U.S. Patent No. 8991701, titled *Integrated Voting System and Method for Accommodating Paper Ballots and Audio Ballots* and issued to the firm in March 2015. It claims an accessible voting station for use during an election having a voting console to present an audio ballot to a voter and receive voting selections from the voter, a printer to print a ballot including the selections and a reader that scans a portion of the printed ballot to determine voting selections. The voting console of the machine is able to present an audio representations of the determined voting selections to be confirmed by the voter before the votes are cast. The voting machine, which accepts traditional paper ballots, includes the audio module in order to improve accessibility to voting

The lawsuit filed by Election Systems identifies the ImageCast Evolution (ICE) voting machine made and sold by Dominion Voting as a product infringing upon the '701 patent. Standard features of the ICE voting machine include high resolution scanning tech, fraudulent ballot detection, an ultrasonic multi-feed detector preventing the machine from accepting more than one ballot at a time, as well as ballot review capabilities.

Election Systems notes among its allegations that the ICE voting machine includes an audio component to present an audio ballot to a voter as well as a printer to create a ballot including the voter's selections. Election Systems also alleges that the ICE machine provides an audio presentation of the scanned voting selections for the voter to confirm his or her voting selections. The suit alleges that Dominion Voting engaged in both direct and indirect infringement of the '701 patent by making the ICE machine and inducing customers to use the machines in an infringing manner. Election Systems also alleges that Dominion Voting's infringement has been willful.

There appear to be relatively few players in the electronic machine sector despite the increased number of voters who will be using such machines in the near future. In the days before last November's general election, the Pew Research Center published an article noting that 28 percent of registered voters in the U.S. live within districts which only direct-recording electronic machines which incorporate technologies like touch screens. Yet a March 2017 election technology industry report sponsored by the Penn Wharton Public Policy Initiative identifies Election Systems and Dominion Voting as two of three firms which dominate the sector; collectively, Election Systems and Dominion Voting cover more than 80 percent of the vendor marketplace by percentage of eligible voters.

Tags: accessibility, audio ballot, blind, district of delaware, Dominion Voting, Election Systems, electronic voting, ice, paper, paper ballot, patent, Patent Litigation, patents, Pew Research, printer, scanner, vision impaired, voting, voting machine, voting machines
Posted In: Courts, District Courts, Electronics, IP News, IPWatchdog Articles, IPWatchdog.com Articles, Patent Litigation, Patents

There are currently **No Comments** comments.

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United States Patent
Bolton et al.

(10) Patent No.: **US 8,991,701 B2**
(45) Date of Patent: **Mar. 31, 2015**

(54) **INTEGRATED VOTING SYSTEM AND METHOD FOR ACCOMMODATING PAPER BALLOTS AND AUDIO BALLOTS**

(71) Applicants: **Steve Bolton**, Clearwater, FL (US); **Tim Cordes**, La Vista, NE (US); **Herman Deutsch**, Buffalo Grove, IL (US)

(72) Inventors: **Steve Bolton**, Clearwater, FL (US); **Tim Cordes**, La Vista, NE (US); **Herman Deutsch**, Buffalo Grove, IL (US)

(73) Assignee: **Election Systems & Software, LLC**, Omaha, NE (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **13/887,817**

(22) Filed: **May 6, 2013**

(65) **Prior Publication Data**
US 2013/0248599 A1 Sep. 26, 2013

Related U.S. Application Data

(63) Continuation of application No. 12/049,210, filed on Mar. 14, 2008, now Pat. No. 8,733,646.

(60) Provisional application No. 60/918,117, filed on Mar. 15, 2007.

(51) Int. Cl.
G06K 17/00 (2006.01)
G07C 13/00 (2006.01)

(52) U.S. Cl.
CPC G07C 13/00 (2013.01)
USPC 235/386

(58) Field of Classification Search
CPC G07C 13/00

USPC 235/386; 94/386
See application file for complete search history.

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Primary Examiner — Christopher Stanford
(74) Attorney, Agent, or Firm — Stinson Leonard Street LLP

(57) **ABSTRACT**

A voting system includes an accessible voting station and a tabulation device. The accessible voting station presents an audio ballot to a voter and receives one or more voting selections entered in response to the audio ballot from the voter. The accessible voting station also prints a ballot that includes the entered voting selections and scans at least a portion of the ballot to determine the voting selections printed thereon. The accessible voting station further presents an audio representation of the scanned voting selections to the voter and receives a confirmation of the audio representation of the scanned voting selections from the voter. The tabulation device tabulates the voting selections printed on the ballot by scanning the printed ballot or receiving voting selection information extracted from the printed ballot from the accessible voting station.

57 Claims, 33 Drawing Sheets
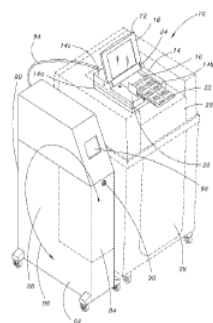
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* cited by examiner

DHS AND PARTNERS CONVENE FIRST ELECTION INFRASTRUCTURE COORDINATING COUNCIL RELEASE DATE: OCTOBER 14, 2017

In January, DHS designated election infrastructure as a subsector of the existing Government Facilities critical infrastructure sector. The designation did not create any new regulations or directives, but instead enabled DHS to prioritize cybersecurity assistance to state and local election officials who request it, made clear domestically and internationally that election infrastructure enjoys all the benefits and protections of critical infrastructure that the U.S. government has to offer, and enabled full and frank discussions between DHS and key stakeholders regarding sensitive vulnerability information.

U.S. Department of Homeland Security

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DHS And Partners Convene First Election Infrastructure Coordinating Council

Release Date: October 14, 2017

For Immediate Release
Office of the Press Secretary
Contact: 202-282-8010

ATLANTA – The Department of Homeland Security (DHS) joined the Election Assistance Commission (EAC), the National Association of Secretaries of State (NASS), and state and local election officials from around the country today to convene the first Government Coordinating Council (GCC) for the Election Infrastructure Subsector. Today's meeting is part of the department's ongoing work with state and local officials as we build trusted relationships to help keep the nation's election systems secure. The 27-member council includes three representatives from the federal government, with the remaining 24 representing state and local governments. The GCC framework provides a well-tested mechanism for sharing threat information between the federal government and council partners, advancing risk management efforts, and prioritizing focus of services available to sector partners in a trusted environment. Participation in the council is entirely voluntary and does not change the fundamental role of state and local jurisdictions in overseeing elections.

"Today's council meeting shows the seriousness with which federal, state and local officials take the threats to election infrastructure, and the level of cooperation taking place to address it," said Bob Kolasky, Acting Deputy Under Secretary of the DHS National Protections and Programs Directorate. "State and local officials have already taken a number of steps to improve the security of the nation's elections, and under the Government Coordinating Council we will be able to further leverage resources and our collective expertise. The security of the nation's elections are critical to our democracy, and DHS stands ready to support this important mission through exercises, information sharing, and technical cyber analysis and expertise."

The GCC structure is established under the department's authority to provide a forum in which the government and private sector entities can jointly engage in a broad spectrum of activities to support and coordinate critical infrastructure security and resilience efforts. It is used in each of the critical infrastructure sectors established under Presidential Policy Directive 21 on Critical Infrastructure Security and Resilience.

In January, DHS designated election infrastructure as a subsector of the existing Government Facilities critical infrastructure sector. The designation did not create any new regulations or directives, but instead enabled DHS to prioritize cybersecurity assistance to state and local election officials who request it, made clear domestically and internationally that election infrastructure enjoys all the benefits and protections of critical infrastructure that the U.S. government has to offer, and enabled full and frank discussions between DHS and key stakeholders regarding sensitive vulnerability information.

Members of the GCC for the Election Infrastructure Subsector include:

- Lori Augino, Director of Elections, Washington
- Chris H. Chambless, Elections Director, Clay County, Florida
- Judd Choate, Director of Elections, Colorado*
- Jim Condos, Secretary of State, Vermont
- Edgardo Cortes, Commissioner, Virginia Department of Elections
- Bob Giles, Director, Division of Elections, New Jersey
- Mark Goins, Coordinator of Elections, Tennessee
- Ricky Hatch, Clerk/Auditor, Weber County, Utah
- Thomas Hicks, Vice Chairman, U.S. Election Assistance Commission
- Sarah Johnson, City Clerk, Colorado Springs, Colorado
- Neal Kelley, Registrar of Voters, Orange County, California
- Bob Kolasky, Acting Deputy Under Secretary, U.S. Department of Homeland Security*
- Connie Lawson, Secretary of State, Indiana*
- Linda Lamone, Administer of Elections, Maryland State Board of Elections
- Matthew Masterson, Chairman, U.S. Election Assistance Commission*
- Denise Merrill, Secretary of State, Connecticut
- Paul Pate, Secretary of State, Iowa
- Noah Praetz, Director of Elections, Cook County, Illinois*
- Steve Reed, Probate Judge, Montgomery County, Alabama
- Tom Schedler, Secretary of State, Louisiana

- Steve Simon, Secretary of State, Minnesota
- David Stafford, Supervisor of Elections, Escambia County, Florida
- Maggie Toulouse Oliver, Secretary of State, New Mexico
- Todd Valentine, Co-Executive Director, New York State Board of Elections
- Linda von Nessi, Clerk of the Essex County Board of Elections, New Jersey
- Mac Warner, Secretary of State, West Virginia
- Michael Winn, Director of Elections, Travis County, Texas

*GCC Executive Committee Member

# # #

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ES&S ESTABLISHES TOP-LEVEL PARTNERSHIPS AND ALBERT INSTALLATION TO FURTHER SECURITY AUGUST 23, 2018

Systems & Software

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August 23, 2018

ES&S ESTABLISHES TOP-LEVEL PARTNERSHIPS, ALBERT INSTALLATION TO FURTHER SECURITY

Omaha, Nebr. – Election Systems and Software (ES&S) is pleased to announce multiple steps, including deeper partnerships with the Department of Homeland Security (DHS) and Information Sharing and Analysis Centers (ISAC), plus the installation of advanced threat monitoring, to further security in the U.S. voting environment.

First, ES&S will soon begin the installation of Albert network security sensors in its voter registration environments. Albert is a unique network security monitoring solution that provides continuous remote monitoring and delivery of automated alerts on both traditional and advanced network threats for state and local jurisdictions, allowing election jurisdictions and ES&S to respond quickly when data may be at risk. Combined with an in-depth review conducted by expert analysts through the Center for Internet Security's (CIS) 24/7 Security Operations Center, Albert is a fully monitored and managed service which will complement ES&S' existing, robust suite of cybersecurity controls.

Second, ES&S is pleased to announce memberships in two Information Sharing and Analysis Centers (ISAC): The Elections Infrastructure ISAC (EI-ISAC) and the Information Technology ISAC (IT-ISAC). An ISAC is a nonprofit organization that provides a central resource for gathering information on cyber threats to critical infrastructure and two-way sharing of information between the private and public sector.

Through membership in the EI-ISAC, ES&S gains access to election-specific threat alerts, cybersecurity awareness and training products, and tools for implementing security best practices. Additionally, as members of the IT-ISAC, ES&S is afforded opportunities to proactively analyze and share IT-focused threats to protect the nation's voting systems and make them even more resilient to cyber-attacks. Under the leadership of the IT-ISAC, ES&S is a founding member of the newly formed Elections Industry Special Interest Group (EI-SIG). The EI-SIG was formed to allow election vendors to expand information sharing concerning threats to election IT systems and engage in dialogue across sectors.

Finally, ES&S is also pleased to announce new partnerships with multiple Department of Homeland Security (DHS) Critical Infrastructure Program offices including the National Protection and Programs Directorate (NPPD) and the National Cybersecurity Assessment and Technical Services (NCATS) to conduct cyber hygiene scans of ES&S public-facing internet presence, monitor and share cyber threat information, detect and report indicators of compromise, develop and distribute election security best practices, and raise the election security awareness of election officials and the voting public.

"The latest technology and active partnerships enable ES&S, together with state and local elections officials, to strengthen the democratic process and elevate the protection of the critical elections infrastructure to a new level of security, accountability and reliability," ES&S President and CEO Tom Burt said. "As a leading provider of election services and products to election officials across the country, ES&S recognizes the importance of collaboration in enhancing cyber-protections to ensure the integrity of the U.S. vote, and we're honored to partner with DHS, EI-ISAC and IT-ISAC in furthering security."

CLEAR BALLOT GROUP'S COMPANY INFORMATION. Look at the top right. The founder came from ES&S. So its three companies but they are all joined together. They audit themselves. And not only that all three companies have defective machines.

CLEAR BALLOT GROUP'S CLEAR AUDIT 1.0.6 INTERIM APPROVAL EXTENSION JANUARY 25, 2016

The Division of Elections has revived and extended the interim approval of ClearAudit™ 1.0.6

which was granted on November 21, 2014. Such interim approval is:

• In effect until January 1, 2017

• For use with elections that are coded by precinct and/or ballot style using ES&S Unity

• For use with elections that are coded by precinct using ES&S EVS, Dominion Democracy

Suite, and E&S or Dominion GEMS voting systems.

This system as approved can be used as an alternative to the manual audit process pursuant to

section 101.591, F.S., following the applicable procedures in rule 1S-5.026, Florida Administrative

Code.

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

MEMORANDUM

TO: Supervisors of Elections

FROM: Maria I. Matthews, Esq.
Director, Division of Elections

DATE: January 25, 2016

SUBJECT: Clear Ballot Group's ClearAudit™ 1.0.6 Interim Approval Extension

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The Division of Elections has revived and extended the interim approval of ClearAudit™ 1.0.6 which was granted on November 21, 2014. Such interim approval is:

- In effect until January 1, 2017
- For use with elections that are coded by precinct and/or ballot style using ES&S Unity
- For use with elections that are coded by precinct using ES&S EVS, Dominion Democracy Suite, and E&S or Dominion GEMS voting systems.

This system as approved can be used as an alternative to the manual audit process pursuant to section 101.591, F.S., following the applicable procedures in rule 1S-5.026, Florida Administrative Code.

If you have any questions, please do not hesitate to contact the Bureau of Voting Systems Certification at 850-245-6220.

CLEAR BALLOT GROUP'S CLEAR AUDIT 1.4.4 FINAL APPROVAL JULY 27, 2018

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

MEMORANDUM

TO: Supervisors of Elections

FROM: Maria I. Matthews, Esq.
Director, Division of Elections

DATE: July 27, 2018

SUBJECT: ClearAudit, Version 1.4.4 - Approval

The Division of Elections has examined "Clear Ballot Group, ClearAudit Version 1.4.4" automated independent audit system, in accordance with section 101.591, Fla. Stat. and Rule 1S-5.026, Fla. Admin. Code, and offers its notice of approval.

This approval includes updates and enhancements to interim approved ClearAudit Version 1.0.6 automated independent audit system, which expired on January 1, 2017. ClearAudit 1.4.4 allows county users, if they so desire, to use the system without vendor support and provides a methodology for auditing election ballots coded by precinct or by ballot style.

Under this approval, all counties and municipalities in Florida may purchase or use this system. A copy of the test report is attached for your information.

MIM/lha

Attachments (1)

THIS IS THE FINAL TEST REPORT FOR THE CLEAR AUDIT 1.4.4 JULY 27, 2018

On February 19, 2018, Clear Ballot Group (CBG) submitted to the Florida Division of Elections' Bureau of Voting Systems Certification a request for approval for ClearAudit™ 1.4.4, an automated independent audit system. Version 1.4.4 is an upgrade of ClearAudit™ 1.0.6, which had interim approval until January 1, 2017. The objective of this examination was to verify whether the enhancements made in ClearAudit™ 1.4.4 met the requirements of Florida's Election Code, specifically, section 101.591, Fla. Stat., and Rule 1S-5.026 Post-Election Certification Voting System Audit, Fla. Admin. Code. The Bureau of Voting Systems Certification focused its examination on the county's ability to setup, administer, and use the ClearAudit™ 1.4.4 system independent of vendor support. The examination included auditing a voting system that had an election coded in Election Systems and Software (ES&S) EVS and Dominion voting Systems (Dominion) Democracy Suite voting systems. This examination did not include the following voting systems: ES&S Unity, ES&S GEMS, Dominion GEMS, or Dominion Sequoia WinEDS.

During testing, the Bureau of Voting Systems Certification determined that ClearAudit™ 1.4.4 was _**NOT**_ able to properly process an XML results file that had small vote totals redacted. Upon learning of this issue, CBG's proffered solution for processing ExpressVote ballots was to manually duplicate them. The Bureau determined this duplication method to be too cumbersome and time-consuming process for Florida counties using the ExpressVote voter interface device and not acceptable for, other than a provisional, approval of this version. On July 3, 2018, upon post-test discussion, CBG requested another opportunity for BVSC to extend re-open testing for this functionality using the Clear Audit Resolver Tool as a more efficient alternative. The Bureau completed examination of these _**PROPOSED**_ solutions on July 9, 2018.

It is determined that ClearAudit™ 1.4.4 now meets the applicable requirements of Florida Statutes and Rule. Therefore, the Florida Division of Elections, Bureau of Voting Systems Certification, recommends an approval of the referenced audit system for use in elections using ES&S EVS, coded by precinct or by ballot style, and Dominion Democracy Suite voting systems subject to the conditions outlined in this report.

THIS NEVER SAID THE PROBLEMS WERE FIXED. THIS WAS APPROVED BASED ON A PROMISE TO GET THEM FIXED!

System Qualification Test Report
Clear Ballot Group, Inc.

ClearAudit™ 1.4.4

July 2018

FLORIDA
★DIVISION OF★
ELECTIONS

Florida Department of State
Division of Elections
R. A. Gray Building, Room 316
500 S. Bronough Street
Tallahassee, FL 32399-0250

Contents

Executive Summary

On February 19, 2018, Clear Ballot Group (CBG) submitted to the Florida Division of Elections' Bureau of Voting Systems Certification a request for approval for ClearAudit™ 1.4.4, an automated independent audit system. Version 1.4.4 is an upgrade of ClearAudit™ 1.0.6, which had interim approval until January 1, 2017.

The objective of this examination was to verify whether the enhancements made in ClearAudit™ 1.4.4 met the requirements of Florida's Election Code, specifically, section 101.591, Fla. Stat., and Rule 1S-5.026 Post-Election Certification Voting System Audit, Fla. Admin. Code. The Bureau of Voting Systems Certification focused its examination on the county's ability to setup, administer, and use the ClearAudit™ 1.4.4 system independent of vendor support. The examination included auditing a voting system that had an election coded in Election Systems and Software (ES&S) EVS and Dominion Voting Systems (Dominion) Democracy Suite voting systems. This examination did not include the following voting systems: ES&S Unity, ES&S GEMS, Dominion GEMS, or Dominion Sequoia WinEDS.

The CBG's audit system includes commercial-off-the-shelf (COTS) optical scanners, desktop and laptop computers, as well as the ClearAudit™ software application, which captures ballot images, via digital scanning for tabulation, and then independently verifies the results by comparison to the county's election voting system results.

The Bureau of Voting Systems Certification conducted the qualification test in three phases including a publicly noticed event. The Bureau used election definitions from the 2016 Presidential Preference Primary, Primary, and General Elections for the purpose of testing ClearAudit™. The Bureau installed ClearAudit™ 1.4.4 in accordance with the Technical Data Package (TDP). The Bureau conducted simulated elections using the EVS and Democracy Suite election management systems (EMS) in use in the state of Florida. Bay County and Leon County Supervisor of Elections (SOE) staff generated ballot PDFs and pre-marked ballots for testing. Test ballots were cast and XML results generated. BVSC working in conjunction with SOE staff created Ballot Definition Files (BDF), produced the elections in ClearAudit™, and scanned the ballot test decks. Using the XML results generated by the voting system, BVSC and SOE staff also created Comparison Results Files (CRF), imported them into ClearAudit™ and evaluated ClearAudit™'s system capability with enhancements represented in CBG's ClearAudit™ TDP. CBG provided election BDFs and CRFs as needed. The Bureau completed testing on May 30, 2018.

During testing, the Bureau of Voting Systems Certification determined that ClearAudit™ 1.4.4 was not able to properly process an XML results file that had small vote totals redacted. Upon learning of this issue, CBG's proffered solution for processing ExpressVote ballots was to manually duplicate them. The Bureau determined this duplication method to be too cumbersome and time-consuming process for Florida counties using the ExpressVote voter interface device and not acceptable for, other than a provisional, approval of this version. On July 3, 2018, upon post-test discussion, CBG requested another opportunity for BVSC to extend re-open testing for this functionality using the Clear Audit Resolver Tool as a more efficient alternative. The Bureau completed examination of these proposed solutions on July 9, 2018.

It is determined that ClearAudit™ 1.4.4 now meets the applicable requirements of Florida Statutes and Rule. Therefore, the Florida Division of Elections, Bureau of Voting Systems Certification, recommends an approval of the referenced audit system for use in elections using ES&S EVS, coded by precinct or by ballot style, and Dominion Democracy Suite voting systems subject to the conditions outlined in this report.

Introduction

CBG submitted a request for approval of ClearAudit™ 1.4.4 automated independent audit system to the Bureau of Voting System Certification (BVSC). This version represents an upgrade to the previously interim approved ClearAudit™ 1.0.6, which expired on January 1, 2017.

The objective of the examination was to verify that ClearAudit™ 1.4.4 meets the requirements in Florida's Election Code, specifically, section 101.591, Fla. Stat., and Rule 1S-5.026 Post-Election Certification Voting System Audit, Fla. Admin. Code. The examination focused on whether the audit system could be used independent of vendor support and included a review of whether the audit system provided a methodology for auditing ballots coded for an election by precinct, by ballot style, and whether it was able to report discrepancies of ¼ of 1% or more when comparing the automated tally and the official totals in a contest.

BVSC examined ClearAudit™ 1.4.4 for use with the ES&S EVS and Dominion Democracy Suite voting systems.

This examination did not include the following voting systems: ES&S Unity, ES&S GEMS, Dominion GEMS, or Dominion Sequoia WinEDS. ClearAudit™ 1.4.4 handling of ExpressVote ballots was not included in the initial submission and examination. CBG indicated that ClearAudit™ 1.4.4 does not support automatic auditing of ExpressVote ballots and the ClearAudit™ Election Administration Guide instructs users to duplicate ExpressVote ballots onto marksense ballots in order to scan them into ClearAudit™. Upon post-test discussions, CBG requested that BVSC re-open testing for this functionality using the ClearAudit Resolver Tool as a more efficient alternative. The Resolver Tool allows ExpressVote ballots to be processed (electronically adjudicated) through the ClearAudit™ software instead of manually duplicating ballots.

Background

BVSC previously examined ClearAudit™ 1.0.3 from May through July 2014 during which time CBG submitted four reiterations. BVSC's recommendation for interim approval was granted on August 18, 2014. See Voting System Qualification Test Report, Clear Ballot Group, ClearAudit™ 1.0.3, August 2014.

On July 21, 2014, CBG submitted ClearAudit™ 1.0.4, a subsequent reiteration to ClearAudit™ 1.0.3. ClearAudit™ 1.0.4 was to add the capability to report discrepancies using Form DS-DE 106A (Discrepancy Report for Automated Independent Audit) as required in Rule 1S-5.026, Florida Administrative Code, to make minor software changes, and to allow use of the system with a county that has an election coded by ballot style and precinct identification. The examination was suspended pending other priority election duties for the 2014 Primary Election.

On September 17, 2014, CBG requested another iteration to incorporate a coding change to Dominion Democracy Suite's ballot code channel checksum1, and to allow automatic reclassification of ES&S header cards for use with absentee coded by ballot styles. Consequently, ClearAudit™ 1.0.4 evolved into ClearAudit™ 1.0.6.

BVSC's recommendation for interim approval for ClearAudit™ 1.0.6 was granted on November 21, 2014 for use as an official means of conducting a post-election voting system audit on or before December 31, 2015, and which was re-extended twice. The last extension expired January 1, 2017. See Interim Approval Extension, January 25, 2016.

System Overview

The ClearAudit™ series is an automated, independent audit system which captures a ballot image using COTS scanners. This audit system also includes COTS desktop and laptop computers in a server/client network. ClearAudit™ uses the scanned ballot images to independently tabulate votes and compares results against the voting system results. The system also highlights differences in the number of votes tabulated and generates a DS-DE 106A if this difference exceeds the triggering threshold. CBG uses its Vote Visualization software application in ClearAudit™ to resolve voter intent.

Conduct of Tests / Findings

This examination was conducted to verify that ClearAudit™ 1.4.4 meets Florida's statutory and administrative rule requirements and, further, to ascertain whether this update corrected the issues reported to CBG in previous test reports.

The examination took place at the following locations:

- R. A. Gray Building, 3rd Floor, 500 S. Bronough Street, Tallahassee, Florida
  February 19, 2018 through July 9, 2018

- Leon County Supervisor of Elections – 2990-1 Apalachee Parkway, Tallahassee, Florida
  May 21,2018 through May 23, 2018

- Bay County Supervisor of Elections – 830 West 11th Street, Panama City, Florida
  May 21, 2018 through May 23, 2018

The scope of this qualification test included reviewing the election setup, preparation, installation, and administrative steps described in CBG's submitted TDP documentation for each of the listed voting systems, as well as other activities needed to satisfy the requirement that the system could be administered without vendor support.

The examination included systems testing requirements, since there were changes to the source code. This examination did not include the duplication method in Rule 1S-5.026, F.A.C. for DRE (touchscreen) ballots, as neither system tested included that type of device.

Physical Audit & Configuration

BVSC conducted a physical audit to verify that the system under test matched the specifications described in the application and the TDP documentation.

BVSC used two setups of the ClearAudit™ 1.4.4 system:

1. All components supplied by CBG. The system was set up as a client-server configuration by BVSC staff in the BVSC Test Lab. One ScanStation was used, with a Fujitsu fi-6400 scanner. The setup of the scanner was for 8-bit (256) grey-scale at 200 dots per inch (dpi) as per CBG's TDP. The images were in a compressed jpg file format. BVSC staff conducted a physical audit of the system to ensure that it matched the specifications as described in the application and the TDP

documentation. This system was used for the testing conducted at the Leon County Supervisor of Elections office.

2. Bay County Supervisor of Elections office set up its ClearAudit™ system before BVSC arrival. BVSC staff conducted a physical audit of the system to ensure that it matched the specifications as described in the application and the TDP documentation. Two ScanStations were used, both with their own Fujitsu fi-6800 scanner. The setup of the scanners was for 8-bit (256) grey-scale at 200 dots per inch (dpi) as per CBG's TDP. The images were in a compressed jpg file format.

Findings:

The systems under test matched the specifications described in the application and TDP documentation.

Installation

The examination began by using the *ClearAudit™ Election Preparation and Installation Guide* to set up the Scan Server, Scan Stations and Administration Station.

Findings:

1. Installation: An issue occurred during the setup of the ScanStation. The Fujitsu fi-6400 scanner driver and the Fujitsu Scanner Error Recovery Guide driver would not install. CBG's response was that the installation ISOs or DVDs used are read-only access. As part of the installation process the driver attempts to extract the file contents to a temporary folder on the DVD. Because it was not able to write to the DVD, the driver was unable to install.

   Solution: To address this issue, CBG recommended copying those files to the local hard drive and executing them from there. Documentation was updated to reflect this recommendation.

2. Instructions: Staff was able to use the instructions in the *ClearAudit™ Election Preparation and Installation Guide* to successfully complete system setup. In many cases, the guide included detailed, easy-to-follow instructions. In any area where additional instructions or information would have been helpful, BVSC requested that the documentation be edited for clarification. In response, CBG submitted an updated version of the *ClearAudit™ Election Preparation and Installation Guide* (version 1.3.4, dated 06/05/2018.) Changes to the documentation were satisfactory.

3. Image Resolution: CBG uses a subjective method to quantify ClearAudit™'s scanned image resolution. It is recommended that CBG develop an objective method instead, particularly if there is future intent to use this system to scan images in accordance with the current minimum 300 dpi requirement set out in Rule 1B-26.003, Fl. Admin. Code, governing the conversion of paper records into electronic records.

BDF Creation / Import

The testing began by using the *ClearAudit™ Ballot Definition File Guide* to create the Ballot Definition File (BDF). The BDF file contains information obtained from the ballots related to precinct, ballot style, contests, and candidates. The BDF file allows the ClearAudit™ software to interpret scanned images. An election is created in ClearAudit™ by importing the BDF file.

Findings:

1. Staff was able to successfully create the BDF files for the elections. However, the nature of the creation process requires a great deal of attention or errors could be made. BVSC recommends automated tools for gathering the ballot information would greatly diminish entry related errors.

2. Staff encountered an issue in an election coded by style in which the ballots of a particular style were all being placed into a single precinct. CBG explained that a special field was missing from the metadata.csv file which caused the issue. It allows ClearAudit™ to read the Target Cards that are designed to work with elections coded by style. When the field was added, the issue was resolved. This special field was not documented in the *ClearAudit™ Ballot Definition File Guide*.

   CBG updated the instructions for using the special field in the *ClearAudit™ Ballot Definition File Guide*. CBG also supplied a new Excel tool and instructions, which simplified the Target Card creation process.

3. Staff encountered an issue after creating an election that did not have the Florida specific features available. After further testing it was determined that a capital "FL" was used instead of the required lower case "fl". Although documentation provided an example that contains the "fl", the documentation did not state specifically that it is required for Florida specific features.

   CBG supplied updated versions of its *ClearAudit™ Ballot Definition File Guide*, *ClearAudit™ Election Administration Guide*, and the *ClearAudit™ Election Preparation and Installation Guide* which state that the lower case "fl" is required for Florida specific functions to be available.

4. Staff observed that the BDF for the multi-card ballot election did not have a cards.csv file. CBG responded that the cards.csv file is used to differentiate between ballots and cards in a multi-card ballot scenario. The absence of the cards.csv file only effects the ballot total on the <u>Statement of Ballots Cast PDF report</u>, which is not used for conducting the audit. All other reports were correct.

   CBG supplied an updated version of the *ClearAudit™ Ballot Definition File Guide* with a note that cards.csv is required if the <u>Statement of Ballots Cast PDF report</u> is to be used.

Election Administration

Once the BDF has been imported and an election has been created the voted ballots are then scanned into the ClearAudit™ system.

Findings:

1. Staff did not observe any issues with the processes outlined in the *ClearAudit™ Election Administration Guide*.

2. Staff verified that in an election coded by ballot style, ClearAudit™ properly rejects a ballot which is of a style not valid for the precinct coded on the Target Card.

3. Staff verified that ClearAudit™ was able to create reports that remove issues, races, or candidates that were withdrawn from an election after it was too late to reprint ballots. ClearAudit™ was able to recalculate totals and percentages to account for the removal.

4. Staff determined that ClearAudit™ 1.4.4 was able to process ExpressVote ballots by using the Resolver Tool. The Resolver Tool allows the canvassing board to view the scanned ExpressVote ballots and manually select and save the voter's choice that was printed on the ballot. CBG documentation was updated to include this process. While this process is acceptable for approval

of this version, future versions of the ClearAudit™ system must be able to read, tabulate, and compare/audit ExpressVote ballots automatically.[1]

5. Staff determined that ClearAudit™ 1.4.4 is not able to process an election that is coded by both precinct and by style[2]. While not required for approval of this version, BVSC highly recommends that future versions should be able to properly process an election coded by both precinct and style.

CRF Creation / Import

The Comparison Results File (CRF) is created using an XML results file exported from the election management system. The CRF contains election data from the primary voting system such as vote totals. The CRF creates relationships between the BDF and XML results and it is required to generate comparison reports.

Findings:

1. Staff was able to successfully create CRF files for the elections. However, the nature of the creation process required a great deal of attention or errors could be made. When multiple contests or multiple choices are the same or very similar it is difficult and tedious to make the correct associations.

   BVSC recommends the next version of the ClearAudit™ system be able to retain the name fields in the vsx files to facilitate proofreading and troubleshooting during the creation of the CRF files.

2. Staff encountered an issue when verifying the accuracy of the comparison reports for an election. Further examination revealed that ClearAudit™ 1.4.4 could not automatically audit a race or precinct results whenever the XML file contained redacted small vote totals in the counter groups[3]. (See Appendix C, Figures 1 and 2)

   BVSC required that the documentation reflect that if an XML file containing redacted small vote totals is used to generate the CRF, the comparative reports will not display accurate comparisons (See Appendix C, Figures 3 and 4) and that in order to complete the audit, counties must manually compare <u>ClearAudit™'s Statement of Votes Cast</u> with the Voting System's <u>Statement of Votes Cast</u> and manually create the DS-DE 106A report.

   BVSC will require that the next version of the ClearAudit™ system be able to properly process the precinct-level XML file, when small group totals have been redacted.

3. Staff was able to verify that ClearAudit™ is able to create a DS-DE 106A (Discrepancy Report for Automated Independent Audit Report) if the criteria outlined in Rule 1S-5.026, Fla. Admin. Code

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[1] On January 1, 2020, §101.56075, Fla. Stat., will require that all voters, including those with disabilities, cast their ballots on voter interface devices that use marksense ballots. This change may affect the approval status of the ExpressVote voting device. If this is the case, the Division of Elections will re-visit this recommendation at that time.

[2] Broward County is currently the only county in Florida that codes its elections by a combination of style and precinct.

[3] §98.0981(2)(a), Fla. Stat. and Rule 1S-2.053 Election Results, Precinct-Level Election Results, Voting History, and Reconciliation Reporting, Fla. Admin. Code, states that if any voter group total is less than 10 votes then all associated group totals are required to be redacted.

are met. The DS-DE 106A report is produced for elections coded by precinct or coded by ballot style. ClearAudit™ is not able to produce a DS-DE 106A report when a single election is coded by both precinct and by ballot style.

BVSC recommends that the next version of ClearAudit™ be able to produce a DS-DE 106A report for elections coded by both precinct and style.

Improvements from Prior Versions

As a part of this ClearAudit™ 1.4.4 examination, BVSC examined the audit system to determine whether this version resolved past issues. In the ClearAudit™ 1.0.6 (November 2014) test report and subsequent testing of ClearAudit™ versions 1.2.0 and 1.2.1, BVSC made functional and procedural recommendations to Clear Ballot Group for continual improvement of future releases of the independent audit system.

Findings:

1. In prior versions, ClearAudit™ users could not determine the versions of the BallotRegisterPDF.exe and ConvertFloridaXML.exe files. This matter is now resolved.

2. In prior versions, while generating a CRF for one of the Democracy Suite elections that had a race with a 'Two Vote' rule, an error message was displayed. ClearAudit™ was unable to process the XML file with a 'Vote for Multiple' contest without modifying the XML or using a command line switch that caused several of the reports to display incorrect data. This matter is now resolved.

3. In prior versions, ClearAudit™ would generate inconsistent data in reports for Presidential Preference Primary (PPP) elections. This matter is now resolved.

4. In prior versions, in elections coded by style, ClearAudit™ did not properly reject a ballot of a style not valid for the precinct coded on the Target Card. This matter is now resolved.

5. In prior versions, ClearAudit™ did not properly handle situations when a candidate or race was removed from a ballot after the ballots were printed. This matter is now resolved.

Recommendations – ClearAudit™ 1.4.4

BVSC makes the following recommendations to enhance usability and/or provide procedural improvements and that Clear Ballot Group address as many of these items as is practical:

1. CBG _should_ develop or use an objective method (in lieu of a subjective method) to quantify that images scanned by ClearAudit™ meet an acceptable image resolution, particularly if there is any future intent to use this system to scan images in accordance with the current minimum 300 dpi requirement set out in Rule 1B-26.003, Fla. Admin. Code, governing conversion of paper records to electronic records.

2. CBG _should_ develop automated tools for gathering the ballot information during the BDF creation. These automated tools would greatly diminish data entry related errors.

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3. ClearAudit™ _should_ be able to properly process an election coded by precinct and style, including production of the DS-DE 106A report for an election coded by precinct and style.

4. ClearAudit™ _should_ be able to retain the name fields in the vsx files. This would be helpful for proofreading and troubleshooting purposes during the creation of the CRF files.

BVSC will require that future versions of ClearAudit™ submitted for approval be able:

1. To scan, tabulate, and compare/audit ExpressVote ballots automatically. This version does not support a completely independent, automated audit of ExpressVote ballots.[4]

2. To automatically audit a race or precinct results with redacted group totals.[5]

NOTE: Subject to grant of approval of ClearAudit™ 1.4.4, CBG must develop and share with their current and future customers a Technical Advisory detailing the issue stated above, along with instructions to work around the issue when it is encountered.

The Technical Advisory must be reviewed/accepted by BVSC and it must be sent to all current Florida customers within 10 days of ClearAudit™ 1.4.4 approval and must be provided on the install disk for future ClearAudit™ 1.4.4 customers.

Solution: CBG supplied a Field Service Bulletin outlining the issue above, along with instructions to work around the issue. BVSC reviewed and approved the proposed Field Service Bulletin for use. (See Appendix D)

Conclusion

The Florida Division of Elections, Bureau of Voting Systems Certification, recommends approval of ClearAudit™ 1.4.4 as the official means of conducting an automated post-election voting system audit in accordance and compliance with section 101.591, Fla. Stat. and Rule 1S-5.026, Fla. Admin. Code for use with elections using ES&S EVS coded by precinct or by ballot style and Dominion Democracy Suite voting systems. The recommendation for approval is granted to allow Florida counties use of the system while also allowing Clear Ballot Group the opportunity to continually improve their automated independent audit system.

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[4] On January 1, 2020, §101.56075, Fla. Stat., will require that all voters, including those with disabili
their ballots on voter interface devices that use marksense ballots. This change may affect the approval
the ExpressVote voting device. If this is the case, the Division of Elections will re-visit this requirement a

[5] Rule 1S-5.026 (7)(b)1, Fla. Admin. Code.
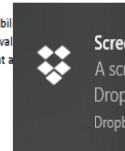
Appendix A - Acronyms

BDF	Ballot definition file
BVSC	Bureau of Voting Systems Certification (Florida Dept. of State, Division of Elections)
CBG	Clear Ballot Group
COTS	Commercial off-the-shelf
CRF	Comparison Results File
CSV	Comma-separated values
Democracy Suite	Dominion Voting System product
Dominion	Dominion Voting Systems, Inc.
DOE	Division of Elections (Florida Dept. of State)
DPI	Dots per inch
EMS	Election Management System
ES&S	Elections Systems and Software, LLC
EVS	ES&S Voting System product
GEMS	Global Election Management System (ES&S and Dominion Voting System product)
PDF	Portable Document Format
PPP	Presidential Preference Primary
SOE	Supervisor of Elections
TDP	Technical Data Package
Unity	ES&S Voting System product

Appendix B - Components Under Review

- ScanServer
  - Hardware
    - 4 core / 8 thread processor
    - 8+ Gb of RAM
    - 500 Gb – 1 TB of disk space
    - Gigabit LAN
    - USB 3.0
  - Software
    - ClearAudit™ 1.4.4
      - Disc 01 – ClearAudit™ 1.4.4 – ScanServer with Ubuntu 16.04.1.iso

- ScanStation Client for use with the scanner
  - Hardware
    - 4 core / 8 thread processor
    - 4+ Gb of RAM (8+ is recommended)
    - 500+ Gb of disk space
    - Gigabit LAN
    - USB 2.0 or higher
  - Software
    - Operating system
      - Windows 10 Professional
    - Client Fujitsu ScandAll PRO v.2.0.12
    - Client Fujitsu TWAIN driver

- Fujitsu Scanners
  - Fujitsu fi-6400
  - Fujitsu fi-6800
  - Fujitsu fi-7180

- Scanners TWAIN drivers
  - Fujitsu fi-6400 IP v1.30.0
  - Fujitsu fi-6800 v.10.10.710
  - Fujitsu fi-7180 PaperStream IP v1.4.0

- Administration and Reporting Station
  - Hardware
    - 4 core / 8 thread processor
    - 4+ Gb of RAM (8+ is recommended)
    - 500+ Gb of disk space
    - Gigabit LAN
    - USB 2.0 or higher
  - Software
    - Operating system
      - Windows 10 Professional
    - Browser(s) from the list below:
      - Google Chrome

- Router - Gigabit
  - Wired only, no wireless capability

- Ethernet Cables
  - Cat5 or better

Appendix C – Comparison Reports Figures

Figure 1. Sample of result XML file. Example of precinct without redaction of small vote group totals.

Figure 2. Sample of result XML file. Example of precinct with redaction of small vote group totals.

```
<Votes groupId="5" refPrecinctId="8">0</Votes>
<Votes groupId="0" refPrecinctId="9">23</Votes>
<Votes groupId="1" refPrecinctId="9">0</Votes>
<Votes groupId="2" refPrecinctId="9">0</Votes>
<Votes groupId="3" refPrecinctId="9">0</Votes>
<Votes groupId="4" refPrecinctId="9">0</Votes>
<Votes groupId="5" refPrecinctId="9">0</Votes>
<Votes groupId="0" refPrecinctId="10">0</Votes>
```

Figure 3. Comparison of Votes Cast with Precincts Report. Comparison System column not showing results.

Figure 4. Comparison of Votes Cast Report. Comparison System column not showing all of the results.

Clear Ballot

Field Service Bulletin
2018-002

Small Vote Totals on the Primary Voting System's XML File

Product	ClearAudit
Versions	1.4
Date	July 11, 2018

When the primary voting system produces comparative results with small vote totals redacted to preserve voter privacy, the comparison of votes cast may show discrepancies due to two different methods of reporting redacted results. This bulletin provides two methods of concluding the audit.

Method 1: Manually compare the statements of votes cast from ClearAudit and the primary voting system

Print the ClearAudit Statement of Votes Cast by Precincts and Counter Groups by following the instructions in section 2.2.14 of the *ClearAudit Reporting Guide*. Print the statement of votes cast from the primary voting system at the precinct and counter group level of detail. Manually compare the results for each candidate.

Method 2: Update the ClearAudit Florida Form 106A report with results from the unredacted statement of votes cast from the primary voting system

Use the following procedure to determine if the redactions for small vote totals, when replaced by the actual vote totals reported by the primary voting system, eliminate the exception and, therefore, are not required to be reported to the Division of Elections.

1. Generate the unredacted statement of votes cast from the primary voting system at the precinct and counter group level of detail.

2. Generate the unredacted ClearAudit Statement of Votes Cast with Precincts report.

3. Generate the Florida Form 106A Audit report in ClearAudit and print it. See the *ClearAudit Reporting Guide* for more information.

4. Beginning with the first contest (such as, Representative in U.S. Congress in Example A below), replace the vote totals in column M (VSPaperVotes) with the unredacted vote totals from the statement of votes cast from the primary voting system at the precinct and counter group level of detail.

5. Replace the numbers in column N (VoteDiscrepancy) with the difference between column L (AuditPaperVotes) and column M (VSPaperVotes). Ignore minus signs.
   Note: See the yellow highlights in column N of Example B below.

6. Compute the sum of column M (VSPaperVotes) for all rows in that contest (which is 622 in Example B below).

7. Compute the sum of column N (VoteDiscrepancy) for all rows in that contest (which is 3 in Example B below).

8. Divide the sum of column N by the sum of column M (which is *0.48%* in Example B below). If that result is less than 0.5%, delete all rows for that contest because the contest does not actually exceed the threshold.

9. Repeat steps 4–8 for each contest. The remaining rows, if any, represent contests that exceed the 0.5% threshold and, therefore, should be displayed on the 106A report submitted to the Division of Elections.

Example A: Initial ClearAudit Florida Form 106A Audit report

Example B: Modified ClearAudit Florida Form 106A Audit report

	A	D	E	F	L	M	N	Q

Modified FS 106A Report Showing Correction of VSPaperVotes (Col M) from EL30A Report.
Contest for Representative in Congress is now BELOW the threshold of 0.5% and no longer an exception.

ContestName	ChoiceName	PrecinctName	CounterGroup	AuditPaperVotes # Votes computed by ClearAudit	VSPaperVotes # Votes Computed by Voting System fill in zeros from EL30A	VoteDiscrepancy Col L - Col M ignore minus signs
Representative in Congress	Candidate CC	PCT 14	AB	10	10	0
Representative in Congress	Candidate CC	PCT 14	ED	10	10	0
Representative in Congress	Candidate CC	PCT 14	EV	3	3	0
Representative in Congress	Candidate CC	PCT 24	AB	10	10	0
Representative in Congress	Candidate CC	PCT 24	ED	10	10	0
Representative in Congress	Candidate CC	PCT 24	EV	3	3	0
Representative in Congress	Candidate CC	PCT 33	AB	10	10	0
Representative in Congress	Candidate CC	PCT 33	ED	10	10	0
Representative in Congress	Candidate CC	PCT 33	EV	3	3	0
Representative in Congress	Candidate CC	PCT 4	AB	20	20	0
Representative in Congress	Candidate CC	PCT 4	ED	10	10	0
Representative in Congress	Candidate CC	PCT 4	EV	66	66	0
Representative in Congress	Candidate CC	PCT 43	AB	10	10	0
Representative in Congress	Candidate CC	PCT 43	ED	10	10	0
Representative in Congress	Candidate CC	PCT 43	EV	3	3	0
Representative in Congress	Candidate CC	PCT 9	AB	10	10	0
Representative in Congress	Candidate CC	PCT 9	ED	10	10	0
Representative in Congress	Candidate CC	PCT 9	EV	3	3	0
Representative in Congress	Candidate DD	PCT 14	AB	20	20	0
Representative in Congress	Candidate DD	PCT 14	ED	20	20	0
Representative in Congress	Candidate DD	PCT 14	EV	6	6	0
Representative in Congress	Candidate DD	PCT 24	AB	20	20	0
Representative in Congress	Candidate DD	PCT 24	ED	20	20	0
Representative in Congress	Candidate DD	PCT 24	EV	6	6	0
Representative in Congress	Candidate DD	PCT 33	AB	20	19	1
Representative in Congress	Candidate DD	PCT 33	ED	20	20	0
Representative in Congress	Candidate DD	PCT 33	EV	6	6	0
Representative in Congress	Candidate DD	PCT 4	AB	40	40	0
Representative in Congress	Candidate DD	PCT 4	ED	20	20	0
Representative in Congress	Candidate DD	PCT 4	EV	132	131	1
Representative in Congress	Candidate DD	PCT 43	AB	20	20	0
Representative in Congress	Candidate DD	PCT 43	ED	20	20	0
Representative in Congress	Candidate DD	PCT 43	EV	6	6	0
Representative in Congress	Candidate DD	PCT 9	AB	20	20	0
Representative in Congress	Candidate DD	PCT 9	ED	10	10	0
Representative in Congress	Candidate DD	PCT 9	EV	6	7	1 Note: minus sign is ignored

Redactions, initially shown as zeros, replaced from EL30A

Final Vote Discrepancies, minus signs ignored — | | | | | 622 | 3 |

Audit Threshold Ratio (should be < 0.5%) — **0.48%**

100 × 3 / 622

✓

ALL THIS REPORT DOES IS SHOW THAT NOTHING IN THIS AUDIT SYSTEM WORKS!!!! EVERYTHING RESULTS IN ERRORS UNLESS YOU MANUALLY GO IN AND FORCE THE RESULTS. (THAT'S CALLED CHEATING)

This examination did not include the following voting systems: ES&S Unity, ES&S GEMS, Dominion GEMS, or Dominion Sequoia WinEDS. ClearAudit™ 1.4.4 handling of ExpressVote ballots was not included in the initial submission and examination. CBG indicated that ClearAudit™ 1.4.4 does not support automatic auditing of ExpressVote ballots and the ClearAudit™ Election Administration Guide instructs users to duplicate ExpressVote ballots onto mark sense ballots in order to scan them into ClearAudit™. Upon post test discussions, CBG requested that BVSC re-open testing for this functionality using the ClearAuditResolver Tool as a more efficient alternative. The Resolver Tool allows ExpressVote ballots to be processed (electronically adjudicated) through the ClearAudit™ software instead of manually duplicating ballots.

So after stating it didn't work and only by artificially changing the numbers manually it works, they go right back to the electronic scanning that didn't work.

Here is the list of the Findings: Every single one shows a problem!

Installation Findings:

1. Installation: An issue occurred during the setup of the ScanStation. The Fujitsu fi-6400 scanner driver and the Fujitsu Scanner Error Recovery Guide driver would not install. CBG's response was that the installation ISOs or DVDs used are read-only access. As part of the installation process the driver attempts to extract the file contents to a temporary folder on the DVD. Because it was not able to write to the DVD, the driver was unable to install.

   Solution: To address this issue, CBG **recommended** copying those files to the local hard drive and executing them from there. **Documentation was updated to reflect this recommendation.** **So we have no proof the problem was fixed, just a possible correction!**

2. Instructions: Staff was able to use the instructions in the ClearAudit™ Election Preparation and Installation Guide to successfully complete system setup. In many cases, the guide included detailed, easy-to-follow instructions. In any area where additional instructions or information would have been helpful, BVSC requested that the documentation be edited for clarification. In response, CBG submitted an updated version of the ClearAudit™ Election Preparation and Installation Guide (version 1.3.4, dated 06/05/2018.) Changes to the documentation were satisfactory.
So most of system set up guide was difficult to follow which means errors could be made if not fully trained in setting it up.

3. Image Resolution: CBG uses a subjective method to quantify ClearAudits scanned image resolution. It is recommended that CBG develop an objective method instead, particularly if there is future intent to use this system to scan images in accordance with the current minimum 300 dpi requirement set out in Rule 1B-26.003, Fl. Admin. Code, governing the conversion of paper records into electronic records.
So the scanned image resolution is not good

BALLOT DEFINITION FILE GUIDE Findings:

1. Staff was able to successfully create the BDF files for the elections. However, the nature of the creation process requires a great deal of attention or errors could be made. BVSC recommends automated tools for gathering the ballot information would greatly diminish entry related errors.
So if not fully trained or paying attention there are errors.

2. Staff encountered an issue in an election coded by style in which the ballots of a particular style were all being placed into a single precinct. CBG explained that a special field was missing from the metadata.csv file which caused the issue. It allows ClearAudit™ to read the Target Cards that are designed to work with elections coded by style. When the field was added, the issue was resolved. This special field was not documented in the ClearAudit™ Ballot Definition File Guide. CBG updated the instructions for using the special field in the ClearAudit™ Ballot Definition File Guide. CBG also supplied a new Excel tool and instructions, which simplified the Target Card creation process.
So a different style ballots into counters causes errors

3. Staff encountered an issue after creating an election that did not have the Florida specific features available. After further testing it was determined that a capital "FL" was used instead of the required lower case "fl". Although documentation provided an example that contains the "fl", the documentation did not state specifically that it is required for Florida specific features.
CBG supplied updated versions of its ClearAudit™ Ballot Definition File Guide, ClearAudit™ Election Administration Guide, and the ClearAudit™ Election Preparation and Installation Guide which state that the lower case "fl" is required for Florida specific functions to be available.
So if you use a "FL" like you are supposed to that causes errors

4. Staff observed that the BDF for the multi-card ballot election did not have a cards.csv file. CBG responded that the cards.csv file is used to differentiate between ballots and cards in a multi-card ballot scenario. The absence of the cards.csv file only effects the ballot total on the Statement of Ballots Cast PDF report, which is not used for conducting the audit. All other reports were correct. CBG supplied an updated version of the ClearAudit™ Ballot Definition File Guide with a note that cards.csv is required if the Statement of Ballots Cast PDF report is to be used.
So it only affects the ballot total which is wrong, but its not used it the audit so its ok. (This is how serious our votes are being taken)

I gave up after this page. But the rest of the report continues to list out all the possible errors and mistakes the Clear Audit system is making.

On the last two pages it shows two charts in which the first has a margin of error of 7.79% (audit threshold is 0.5% so it failed) for "Initial FS106A Report with redactions for small vote totals" and the second shows the "corrected" method where the error is only 0.48% so it states "Contest is now BELOW the threshold and no longer an exception"

THERE IS A HUGE PROBLEM WITH THIS. These reports are not comparing the error from the previous chart, they are creating a whole new system to get the desired results. Here is there "easy to follow" system of "correcting" the numbers. Here is

Title of first chart. **"Initial FS106A Report with redactions for small vote totals"**
Title of second chart. **"Modified FS 106A Report showing correction of VSPaperNotes (Col M) from EL30A Report"**

Here is there "easy to follow" system of "correcting" the numbers.

hod 2: Update the ClearAudit Florida Form 106A report with results from the unredacted
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the following procedure to determine if the redactions for small vote totals, when replaced by the
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required to be reported to the Division of Elections.

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3. Generate the Florida Form 106A Audit report in ClearAudit and print it. See the *ClearAudit Reporting Guide* for more information.

4. Beginning with the first contest (such as, Representative in U.S. Congress in Example A below), replace the vote totals in column M (VSPaperVotes) with the unredacted vote totals from the statement of votes cast from the primary voting system at the precinct and counter group level of detail.

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8. Divide the sum of column N by the sum of column M (which is 0.48% in Example B below) that result is less than 0.5%, delete all rows for that contest because the contest does not actually exceed the threshold.

9. Repeat steps 4–8 for each contest. The remaining rows, if any, represent contests that exceed the 0.5% threshold and, therefore, should be displayed on the 106A report submitted to the Division of Elections.

THIS IS AN ARTICLE FROM 2016. BROWARD MAIL-IN-BALLOT SECRETS? RPOF'S GOT YOU COVERED, VOTERS

Here are some highlights:

1) "Florida law prescribes that when the
supervisor of elections takes in all these ballots, they have to be approved by the canvassing board."

2) Last week the Broward supervisor was on the witness stand explaining to Circuit Judge Carol-Lisa Phillips what corrective steps her office has taken since she left Amendment 2 off "several" ballots -- how many exactly remains a mystery. NORML, a marijuana legalization group, sued Snipes for the error, reminding the court that -- well, yeah, it's important -- because for Amendment 2 to pass, it needs 60 percent of the voters to approve it

3) "In four separate visits to the elections headquarters in Lauderhill, attorney Shestokas said he never saw the canvassing board convene or supervise the opening of ballots, even though a public notice published by the elections office suggests the board is meeting daily.

4) In a secure room inside a warehouse, Shestokas said he watched how elections department staff sorted ballot envelopes, examined signatures and opened ballots. ... In addition to questioning why the canvassing board wasn't present, Shestokas said he wondered why members of the public couldn't view mail ballots before they were accepted and opened. Florida law allows the public to challenge ballots they consider invalid."

November 2, 2016

Dr. Brenda C. Snipes
Supervisor of Elections
115 South Andrews Avenue, Room 102
Fort Lauderdale, Florida 33301

Dear Supervisor Snipes:

I write in response to reports that your office is engaged in ongoing violations of Florida law governing the canvassing of vote-by-mail ballots. Specifically, I have been advised that tens of thousands of vote-by-mail ballots in Broward County are being opened by your staff: (1) before they have been canvassed by the county canvassing board; and (2) without providing the public the opportunity to review or file a protest against the canvass of a ballot believed to be legally deficient. These illegal actions must stop immediately.

Florida law requires each supervisor of elections to keep every vote-by-mail ballot "unopened in his or her office until the county canvassing board canvasses the vote." Fla. Stat. § 101.68(1). The county canvassing boards in nearly all of Florida's large counties convened beginning on October 24—the first day authorized by law—to begin canvassing vote-by-mail ballots. According to the Public Notice posted on your website, the Broward County Canvassing Board has not met since October 19's Logic and Accuracy Testing and will not meet again until Monday, November 7. Given that the canvassing board has apparently not canvassed *any* vote-by-mail ballots, your office has no legal authority to open these ballots. You and your staff must immediately cease opening vote-by-mail ballots until the Broward County Canvassing Board has been properly convened to begin the canvass in compliance with the law.

Florida law also allows any registered voter who believes a vote-by-mail ballot is illegal due to a defect on the voter's certificate or the vote-by-mail affidavit to file with the canvassing board a protest against the canvass of the ballot. Fla. Stat. § 101.68(2)(c)2. Yet you have prevented voters from exercising their right to have allegedly deficient ballots reviewed by the canvassing board by excluding the public from the process by which the vote-by-mail ballots are reviewed. The artificial "public inspection" period of only 30 minutes per day provided by your office is plainly insufficient and contravenes the purpose of this law. Moreover, because a challenge based on a defect in the voter's certificate "may not be accepted after the ballot has been removed from the mailing envelope," your decision to open vote-by-mail ballots prior to canvassing may have permanently deprived voters of their legal right to lodge a protest against illegal ballots.

The illegal conduct outlined above threatens irreparable harm to the Republican Party of Florida and its voters. Your actions are also contrary to the public's interest in a fair, open, and transparent process that ensures every person entitled to vote has the opportunity to cast a ballot and have that ballot counted properly. Given the media reports of your office's many failures this election cycle, including your omission of a congressional race and proposed constitutional amendment from some ballots, printing ballots with the word "no" on the "yes" line, and distribution of inaccurate voter identification

cards, the Republican Party of Florida is prepared to take all necessary legal actions to ensure that Broward County conducts its election in compliance with the law.

Please respond to my office by 4 p.m. today to confirm the immediate actions that you are taking to correct these issues prospectively and to correct any errors or illegality that have occurred to this point.
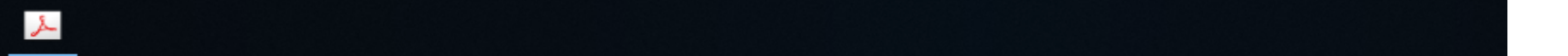
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Nancy Smith

Broward Mail-In-Ballot Secrets? RPOF's Got You Covered, Voters

By NANCY SMITH (/SOURCE/NANCY-SMITH)
November 3, 2016 - 6:00am

For the second time during Election 2016, the Republican Party of Florida rose to protect the vote in the Sunshine State -- and won.

It was a bang-bang victory over vote-by-mail mishandling that played out Wednesday.

Blaise Ingoglia

Here's what happened.

After RPOF volunteers in Broward County reported elections officers in the 600,000-strong Democratic county had opened tens of thousands of vote-by-mail ballots before they were cleared for counting, party Chairman Blaise Ingoglia moved quickly.

Appearing on Fox News Wednesday, the chairman told Adam Shapiro, "Florida law prescribes that when the supervisor of elections takes in all these ballots, they have to be approved by the canvassing board." And these were not.

The bottom line is, the officials have no legal authority to open the ballot envelopes.

The issue actually came to light behind the scenes a week ago, after the Republican National Lawyers Association sent Florida Bar-certified attorney David Shestokas from Chicago to watch the election in always-colorful Broward.

On Wednesday Ingoglia told Fox's Shapiro 1) none of the ballots had been approved, 2) he had written a letter to Broward Supervisor of Elections Brenda C. Snipes *(see letter reproduced below)*, and 3) the party would file a lawsuit at 9 a.m. ET Thursday if county officials failed to respond to his complaint by close-of-business Wednesday.

Broward officials did respond very much on time, avoiding another day on a witness stand for Snipes, who no doubt has seen enough courtrooms for one election year.

Last week the Broward supervisor was on the witness stand explaining to Circuit Judge Carol-Lisa Phillips what corrective steps her office has taken since she left Amendment 2 off "several" ballots -- how many exactly remains a mystery. NORML, a marijuana legalization group, sued Snipes for the error, reminding the court that -- *well, yeah, it's important* -- because for Amendment 2 to pass, it needs 60 percent of the voters to approve it. On Friday the judge ruled (http://www.miamiherald.com/news/local/community/broward/article111056322.html) Snipes' restoration plan would suffice.

So, within hours of receiving Ingoglia's letter, sources told The Miami Herald (http://www.miamiherald.com/news/local/community/broward/article112183717.html), Snipes' office had brokered this two-step compromise:

- Starting Thursday morning, board member Judge John D. Fry will be at the supervisor's office in person to oversee canvassing of mail-in ballots.
- Both state parties, Republican and Democratic, will also be allowed a representative on hand at all times as ballots are canvassed.

"I am pleased that Broward County has quickly agreed to take corrective actions in response to the concerns raised in our letter," Ingoglia said in a statement he sent to Sunshine State News late Wednesday. "Florida's voters must have confidence that the election process is fair, open, and transparent. The Republican Party of Florida will continue to monitor the canvassing process to ensure there are no further violations of the law."

I don't know, folks. There has to be something in the supervisor of elections' water in South Florida. Every election cycle, it's something, some kind of screwup. There's never a smooth ride. If it isn't Susan Bucher in Palm Beach County, it's Brenda Snipes in Broward. Some years, heaven help us, it's *both*.

And we wonder how Donald Trump can amass so many believers with his "rigged elections" rhetoric.

Brenda C. Snipes

You know how I feel. I blame a lot of it on early voting and the machinery that propels it. If these Democratic supervisors in big, populous blue counties would spend as much time preparing for a smooth election as they do putting around with party leaders who only want to manipulate early voting, maybe they could step up their game. Run a professional ship. You know, for the sake of the principles they represent, and for the voters. Remember voters?

In fact, the Broward elections process -- canvassing board included -- is so screwed up, they don't get where they went wrong. They're way past recognizing their problems. Read between the lines of the Herald story.

"In four separate visits to the elections headquarters in Lauderhill, attorney Shestokas said he never saw the canvassing board convene or supervise the opening of ballots, even though a public notice published by the elections office suggests the board is meeting daily. ...

"In a secure room inside a warehouse, Shestokas said he watched how elections department staff sorted ballot envelopes, examined signatures and opened ballots. ... In addition to questioning why the canvassing board wasn't present, Shestokas said he wondered why members of the public couldn't view mail ballots before they were accepted and opened. Florida law allows the public to challenge ballots they consider invalid."

"Essentially," he said, "they're opening the ballots in secret." Shestokas claims he passed along his observations to the RNLA.

ARTICLE FROM NOVEMBER 9 2018 SOMETHING VERY ODD HAPPENED WITH BROWARD COUNTY'S ALLOTS IN THE FLORIDA SENATE ELECTION

As of Thursday afternoon, a total of 675,216 votes had been counted in the Senate race in Broward (466,321 for Nelson and 208,895 for Scott). By comparison, the
gubernatorial race had 701,080 cast in Broward, and even the commissioner of agriculture race had 685,440 total votes while the chief financial officer race had 685,017 votes.
So 25,864 people just in Broward county only decided to vote for a governor but not vote for a Senator. And 10,000 out of those thought agricultural commissioner and chief financial officer were more important.

On Friday, there was more evidence showing that the design of the ballot in
Broward County could explain why the Senate race—and thus Nelson—got
proportionally fewer votes than they did in the rest of the state. The Sun
Sentinel reported, "More than 24,900 Broward residents voted for Florida
governor but not for U.S. senator," and that the pattern of fewer votes in the
Senate race than in lower-profile statewide races "appears in no other major Florida County"

The reason for the vote gap could be that Broward put the Senate race below the instructions for filling out the ballot in the far left column, which violates established best practices for ballot design, according to experts cited by the Sun Sentinel.

Meanwhile, the count in Florida's gubernatorial race has also tightened, meaning that there could be an automatic recount there too if it ends up with a margin of less than 0.5 percent. Republican Ron DeSantis now has a 38,515-vote lead, or **0.47 percent**.

While Gillum conceded late Tuesday night, he said in a statement Thursday that "it has become clear there are many more uncounted ballots than was originally reported" and that the campaign "is monitoring the situation closely and is ready for any outcome, including a state-mandated recount."

11/12/2018   Florida Senate election: missing votes in Broward County.

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Something Very Odd Happened With Broward County's Ballots in the Florida Senate Election

By MATTHEW ZEITLIN
NOV 09, 2018 • 11:21 AM

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https://slate.com/news-and-politics/2018/11/florida-senate-election-missing-votes-broward-county-bill-nelson-rick-scott.html   1/5

11/12/2018   Florida Senate election: missing votes in Broward County.

Supporters of Sen. Bill Nelson react to results Tuesday night during an election night event in Orlando.
Jeff J Mitchell/Getty Images

More on **2018 Midterms**

1   Florida Officially Orders Statewide Recount in Senate and Governor's Races

2   Red States and Blue States? With Election Results Like These, They're Worlds Apart.

3   A Parkland Survivor on Florida's New Pro-Gun Governor, the Thousand Oaks Shooting, and Not Losing Hope

4   Why Trump Is Ranting About "SIGNATURES" on Arizona Ballots

This post has been updated with additional information about Broward County's ballot design.

Florida has retained the championship belt for election shenanigans, as three statewide races could be headed for a recount.

The gap between Rick Scott and Bill Nelson, in the election for the latter's Senate seat, has only continued to narrow. The race was already within the 0.5 percent margin needed to trigger a recount on Wednesday, when Scott had roughly a 35,000-vote lead. That's been cut in half to about 17,000 as ballots have continued to come in. While Scott is still the favorite to ultimately win, FiveThirtyEight has shifted the race from "likely Republican" to "lean Republican."

One reason for hope for Nelson is that a traditionally Democratic area, Broward County, has so far reported fewer votes for the Senate race compared with the gubernatorial race, according to data compiled by MSNBC's Steve Kornacki. In other Florida counties, no such discrepancy exists. While some of the discrepancy could be due to genuine undervotes—for instance, the design of the ballot may have led some voters to miss it and not vote in that race—it's possible that the county hasn't correctly counted

https://slate.com/news-and-politics/2018/11/florida-senate-election-missing-votes-broward-county-bill-nelson-rick-scott.html   2/5
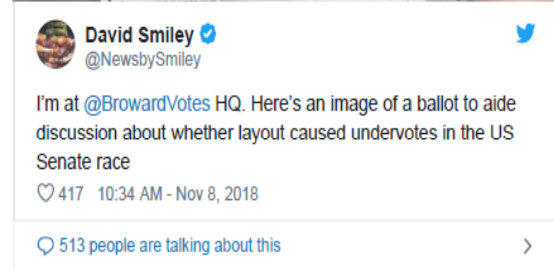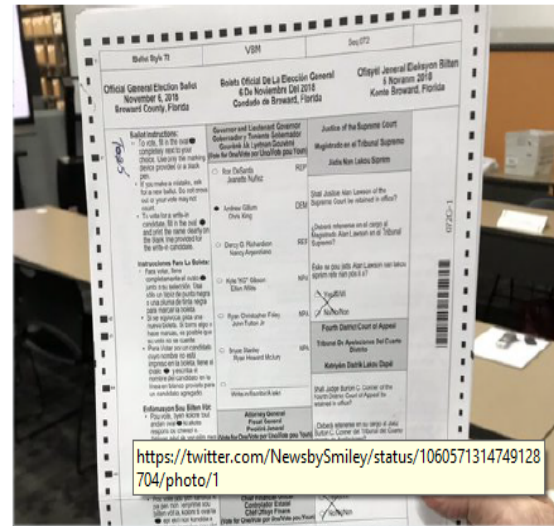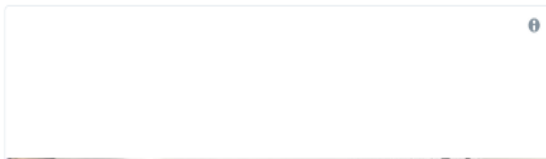
all the ballots. About 24,000 ballots in Broward County registered a vote in the governor's race but not for the Senate race.

The discrepancy with the Senate race tally is consistent down the ballot, with more votes cast in lower-profile races like commissioner of agriculture, chief financial officer, and attorney general than in the Senate race, according to the preliminary county results. As of Thursday afternoon, a total of 675,216 votes had been counted in the Senate race in Broward (466,321 for Nelson and 208,895 for Scott). By comparison, the gubernatorial race had 701,080 cast in Broward, and even the commissioner of agriculture race had 685,440 total votes while the chief financial officer race had 685,017 votes.

Democratic election lawyer Marc Elias told the Sun Sentinel that he thinks the undervotes were due to voting machines not detecting genuine votes. "I am pretty confident what you are going to see are markings that were not picked up by the machines or a calibration issue that was not registering that part of the ballot," he said.

On Friday, there was more evidence showing that the design of the ballot in Broward County could explain why the Senate race—and thus Nelson—got proportionally fewer votes than they did in the rest of the state. The Sun Sentinel reported, "More than 24,900 Broward residents voted for Florida governor but not for U.S. senator," and that the pattern of fewer votes in the Senate race than in lower-profile statewide races "appears in no other major Florida county."

The reason for the vote gap could be that Broward put the Senate race below the instructions for filling out the ballot in the far left column, which violates established best practices for ballot design, according to experts cited by the Sun Sentinel.

https://twitter.com/NewsbySmiley/status/1060571314749128704/photo/1

David Smiley ✔
@NewsbySmiley

I'm at @BrowardVotes HQ. Here's an image of a ballot to aide discussion about whether layout caused undervotes in the US Senate race

♡ 417   10:34 AM - Nov 8, 2018

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The problem could have been exacerbated in congressional districts where a Democrat was running unopposed and was thus not on the ballot, meaning that the Senate race would have been the only race listed in the lower left column. "The largest discrepancies between the governor and Senate votes appear in a group of precincts in southern Broward," the Sun Sentinel reported, where Democratic Rep. Frederica Wilson was running unopposed and was not on the ballot.

Meanwhile, the count in Florida's gubernatorial race has also tightened, meaning that there could be an automatic recount there too if it ends up

with a margin of less than 0.5 percent. Republican Ron DeSantis now has a 38,515-vote lead, or 0.47 percent. While Gillum conceded late Tuesday night, he said in a statement Thursday that "it has become clear there are many more uncounted ballots than was originally reported" and that the campaign "is monitoring the situation closely and is ready for any outcome, including a state-mandated recount."

In a third statewide race, Democrat Nikki Fried has eked out a 575-vote lead over Republican Matt Caldwell for agriculture commissioner, a margin well under the 0.5 percent requirement for seeking a recount. ◼

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2018 Midterms   Florida

*****THIS IS HOW THEY PLAN TO STEAL THE ELECTION. THEY ARE GOING TO FORCE THE BALLOTS INTO THE FAKE 0.5 % MARGIN OF ERROR SO THERE IS A STATE MANDATED RECOUNT WHICH IS WHAT GILLIUM WANTS. ******

************HERE IS WHY GILLIUM WANTS THE RECOUNT*******

Counties can now begin to re-feed ballots into county or central count tabulators for the mandated machine recount. This process must be completed in all 67 counties by 3 p.m. on November 15, when the re-tabulated results are due back to the secretary of state. The results are known as the "Second Unofficial Returns."

SO NOW ALL THE BALLOTS WILL BE TOUCHED BY HAND AND FED THROUGH…

Beginning around 8:15 a.m., officials from Swan's office began to manually feed about 77,000 ballots into **two new electronic DS 200 machines that tabulate the votes cast in early voting, on Election Day and by mail**. About three hours later, about one-third of the ballots had been read, Swan said.

So they are going back to the most unreliable machine and they are mixing all three ballots, early, election day and mail. ***The review included 11", 14", 17" and 19" ballots. In the course of the review, the EAC found various degrees of ballot image distortion; **with the 17" ballot having the largest degree of skew.** The EAC is working with jurisdictions, VSTLs and the manufacturer to understand and resolve this issue.****

Security Seals Ideally, the DS200's exposed ports, memory card access areas, ballot box doors and case seams would be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances. Seals should be logged to maintain chain of custody of sensitive materials.

Ballot Box Access Optical scan systems have at least one and possible more ballot boxes. Each ballot box should be inspected by a voter at the beginning of voting to make sure that they are empty. These ballot boxes should locked and/or be sealed with tamper-evident tape.

The Memory Card is Sensitive Corrupt memory cards may be able to introduce viruses, cause the main election server to crash and falsify votes. Access to the memory card should be controlled, monitored and logged at all times.

Correct Inks Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should use the writing instrument provided at the polling place or, if voting at home, black ballpoint pen that does not bleed through paper.

Unresponsive Touchscreens1 During EAC testing on the Unity 3.2.1.0 voting system, some DS200s stopped responding to interactions with the user interface. The anomaly presented itself at random times during the testing process. ES&S informed the EAC that the root cause of touch screen unresponsiveness is linked to an improperly implemented internal system log. This log is only accessible to ES&S technicians when troubleshooting errors with the fielded system. One specific event tracked by this log is the presence of the election media USB memory stick. If the unit is powered on without a memory stick inserted, the system records an event eight (8) times per second to the log. When the log reaches capacity, it causes a section of the internal compact flash (CF) card to become inaccessible. This same section of the CF card contains the calibration settings for the DS200's

touch screen interface. When this section of the CF card is inaccessible the calibration settings are no longer available to the system so the screen becomes unresponsive.

Skewed Ballots 2 During testing on the Unity 3.2.1.0, a DS200 did not count a valid mark for a race. The anomaly was discovered when county testers reviewed the printed election summary report for the DS200 unit. The count for a single contest did not match the expected results. The test was performed to verify that ES&S had corrected a previous anomaly with similar symptoms. The county testers were using a 17" ballot with contests concentrated in the lower sections of the ballot. In discussion with the EAC, ES&S stated that they have only been able to replicate this issue in testing by removing the plastic guides and physically altering the ballot (cutting of a corner). In an effort to understand the issue the EAC focused on reviewing ballot images from several states and previous test campaigns. The review included 11", 14", 17" and 19" ballots. In the course of the review, the EAC found various degrees of ballot image distortion; with the 17" ballot having the largest degree of skew. The EAC is working with jurisdictions, VSTLs and the manufacturer to understand and resolve this issue.

During the EAC Certification process3 it was revealed that a DS200 coded for Election Day counting will not support more than 18 precincts, the DS200 does not support more than 40 ballot styles in a single absentee precinct in a ballot by-style election. If an election definition contains more than 40 ballot styles, the user has to define more than one absentee precinct and then separate the ballots into groups for processing. In addition, all optical scan ballots used in a given election must be the same size and have the same position capacity, an early vote station will only support a maximum limit of 9999 precincts meaning that a large number of precincts may result in small ballot processing delays, and an early vote station will not be able to print a precinct-by-precinct report by default.

Guess what size Broward County has….. 17 inches. It's also formatted differently when you go to print. The error report above stated**… using a 17" ballot with contests concentrated in the lower sections of the ballot. In discussion with the EAC, ES&S stated that they have only been able to replicate this issue in testing by removing the plastic guides and physically altering the ballot (cutting of a corner). and with the 17" ballot having the largest degree of skew. The EAC is working with jurisdictions, VSTLs and the manufacturer to understand and resolve this issue.**

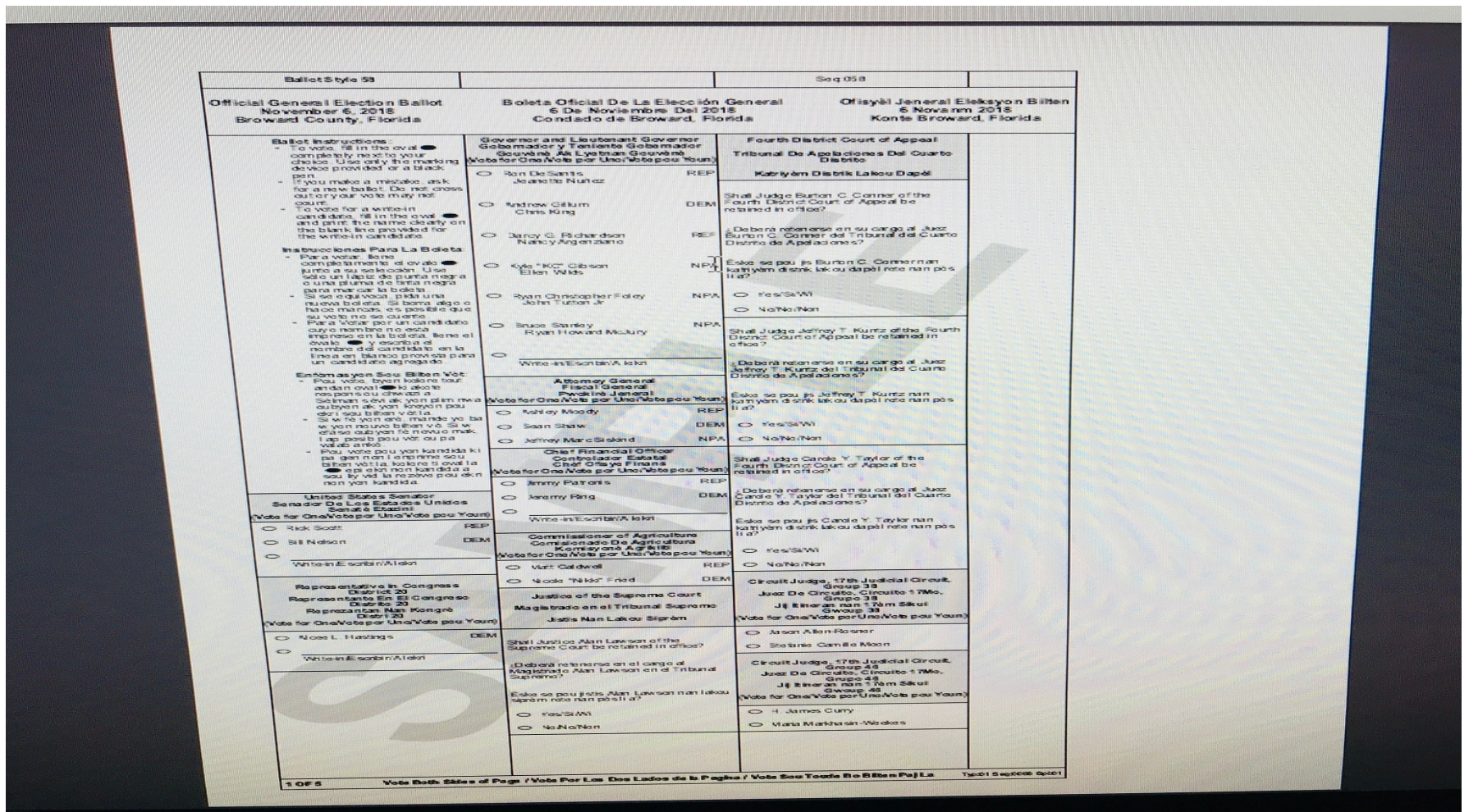Here is the ballot when the PDF is opened from the website
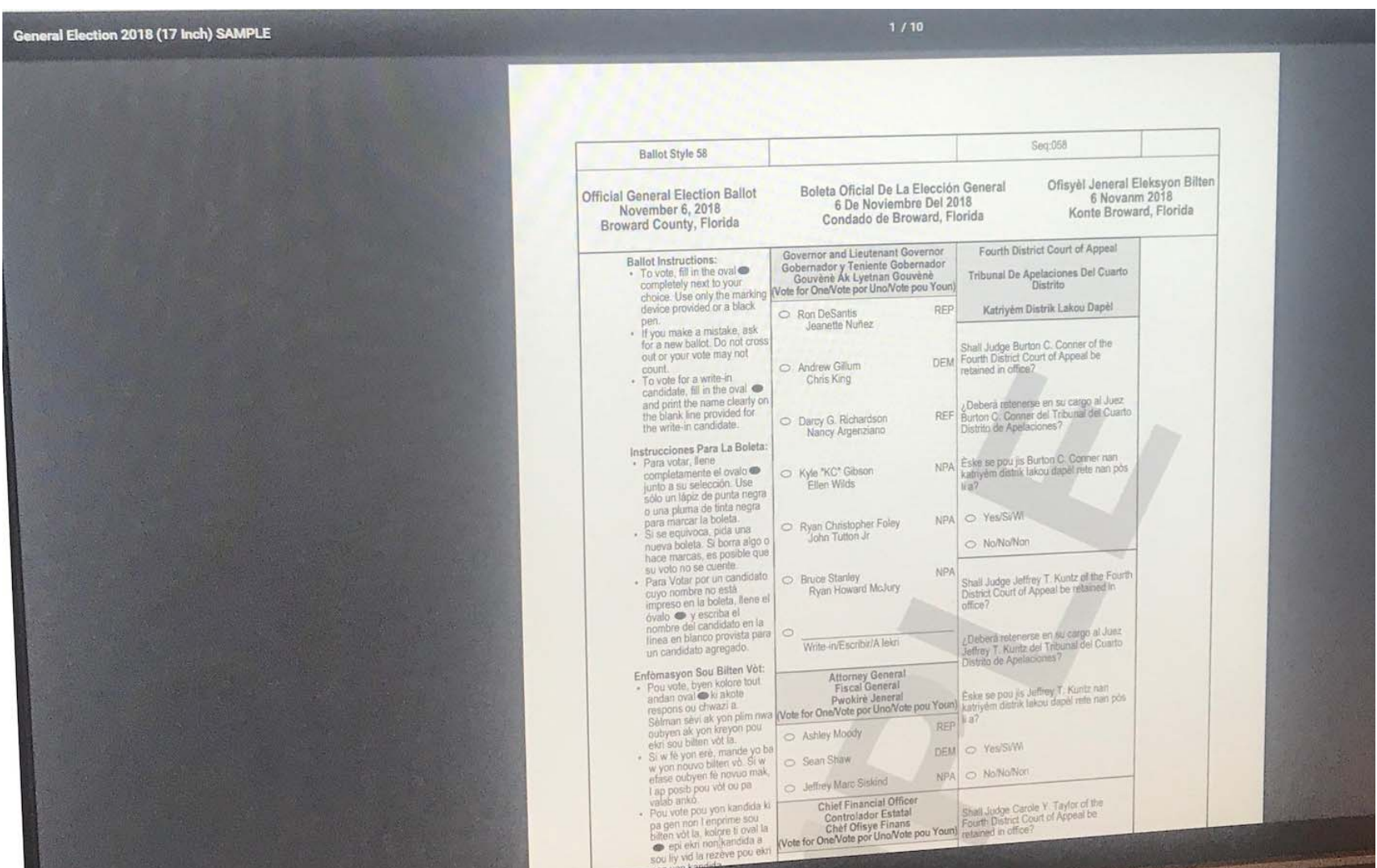
It has even borders on the sides. I checked using an engineering scale at 60 parts per inch.

Now look what happens you go to print. The scale on the right is at 100 but now look at the side margins.
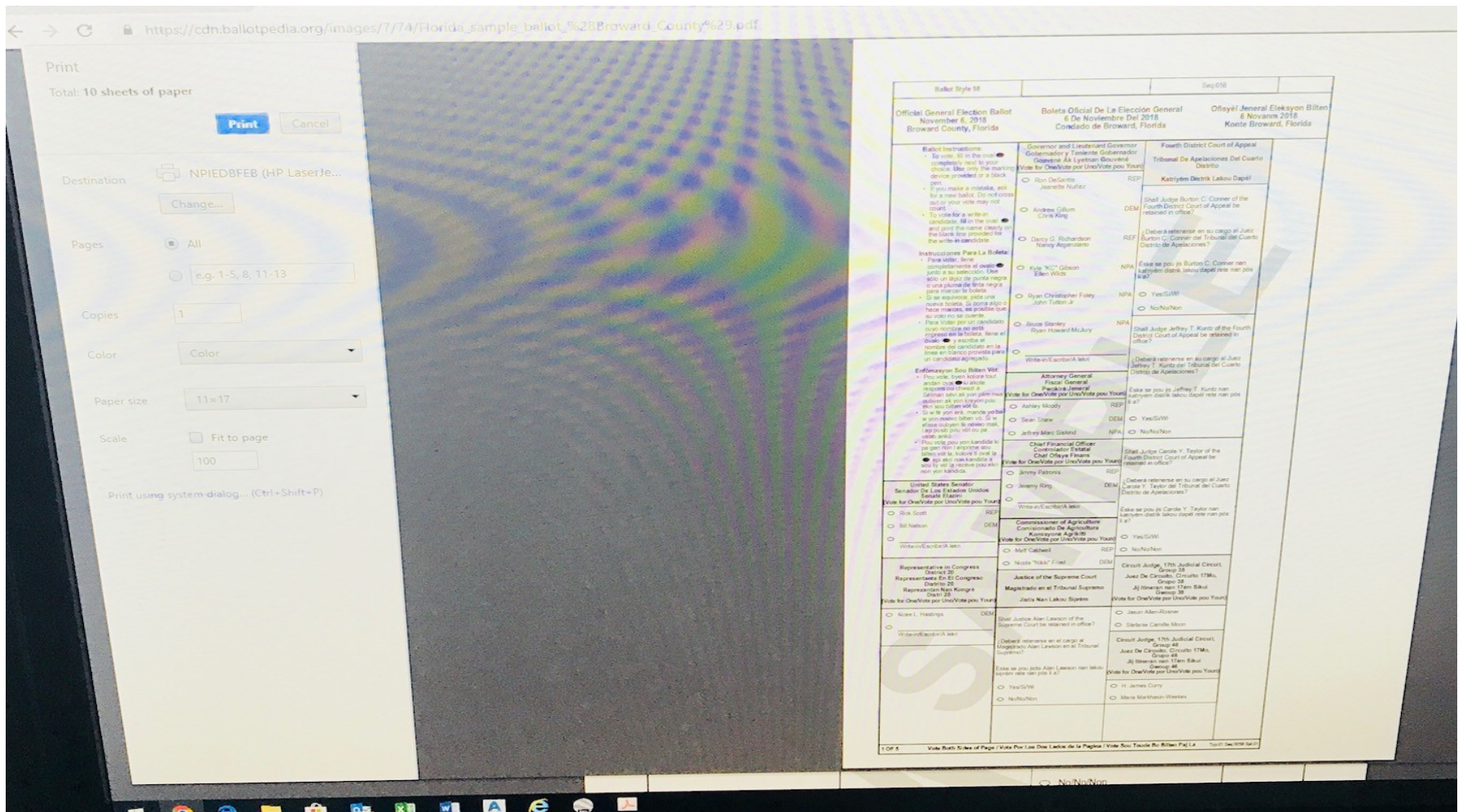
And when you complete the print the sides are still severely offset.

Now look what happens you go to print but this time I hit "fit to paper". The scale drops down to 95% but the margins are even. They look a little off but that's just the angle of pic. I measured with the scale again.
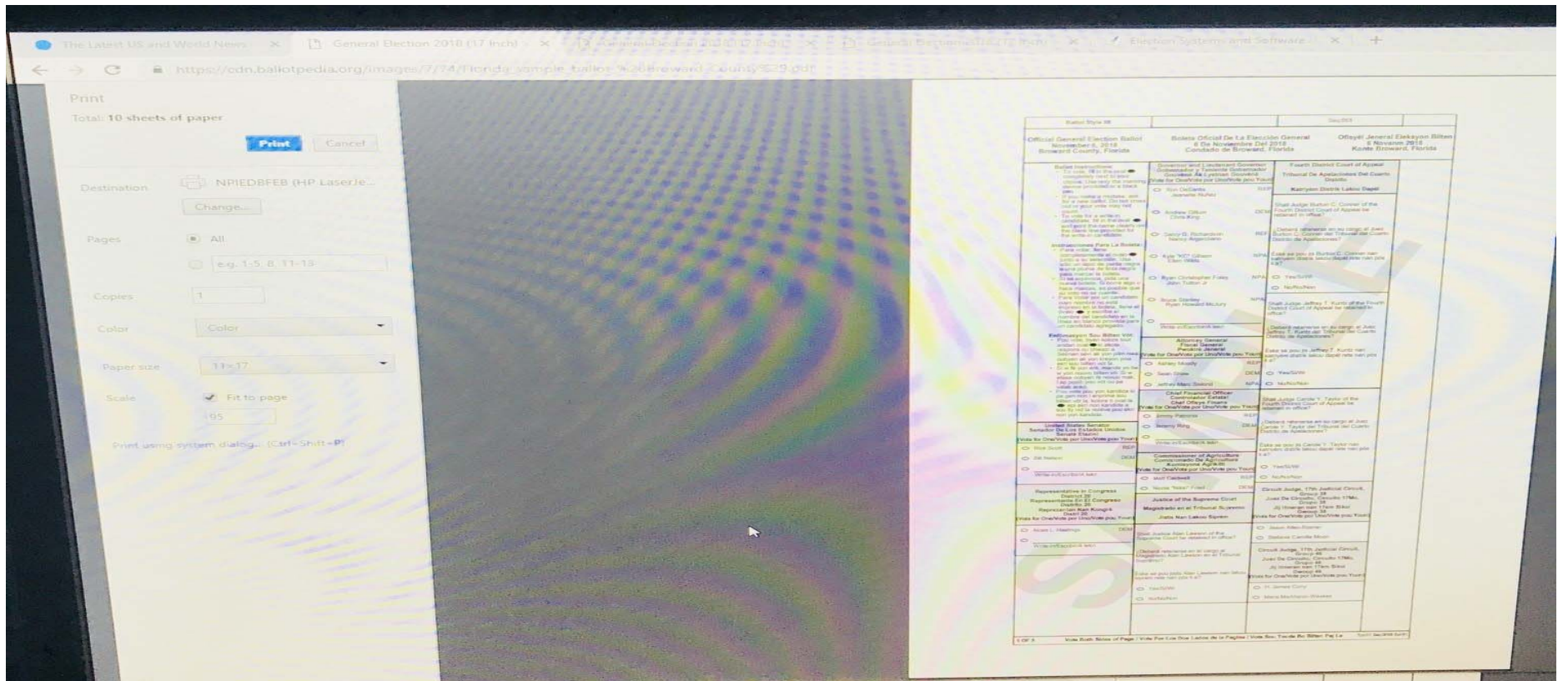
And when you complete the print the side margins lengths are the same.