

**FLORIDA'S TRANSITION FROM TOUCH SCREENS TO
OP SCAN PAPER BALLOTS FOR EARLY VOTING**

– A SNAPSHOT REVIEW IN TWO COUNTIES –

September 23, 2008

Conny B. McCormack, Consultant

With Support from the Pew Charitable Trusts' Make Voting Work Initiative

(The views expressed are those of the author and do not necessarily reflect the views of The Pew Charitable Trusts or Make Voting Work: a project of the Pew Center on the States)

Executive Summary

This report examines the challenge counties in Florida now face due to the recent change in state law that requires conducting in-person early voting before Election Day with optical scan paper ballots (op scan) instead of using direct record electronic (DRE) touch screens as was past practice in Florida and remains the norm across the U.S. In recent years, many states, including Florida, have experienced an explosive growth in the popularity of in-person early voting. Providing the option of early voting at a limited number of locations over multiple days or weeks has been linked almost exclusively to the use of DRE voting equipment. This is due to the capacity of DREs to produce multiple types of ballots virtually instantaneously to accommodate the hundreds or even thousands of different ballot types that are needed, especially in large urban jurisdictions.

The capacity to produce a multiplicity of ballot types is required in order to allow any voter residing anywhere within a county the opportunity to cast a ballot on the candidates/issues that s/he is eligible to vote on at the voter's choice of early voting locations. The need for expansive equipment capacity and flexibility for early voting contrasts with Election Day when voters are directed to vote at an assigned precinct in their neighborhood where the ballots are all alike as the content is tied to the candidates/issues specific to that one voting precinct¹.

Looking at the transition experience of two large Florida counties, Miami-Dade and Hillsborough (Tampa area), in conjunction with the August 2008 statewide primary election revealed it takes longer to process each early voter using an op scan system primarily due to the time required to print each voter's ballot. Printing a one-page ballot required approximately 20-30 seconds compared with 2-3 seconds to prepare the access card for a DRE system. The change in equipment also entailed deploying more staff at the early voting sites. The multiple equipment components (printers and op scan readers) also require more space than setting up an early vote site with DREs².

The key factors impacting longer voter processing time are length of the ballot combined with voter turnout. For the August 2008 primary election, ballot content in each of the two counties fit onto a one-page op scan ballot and voter turnout was very low³. As a result, early voters were processed efficiently without delay despite the increased processing time needed for each early voter compared to the past. However, for the November 2008 general election, multiple page ballots per voter will be required in both counties. The additional time needed to print up to four op scan ballots, coupled with the expectation that the volume of early voters will increase sevenfold or more compared

¹ A very small number of counties in a few States are utilizing Election Day vote centers which, like early voting, allow any voter residing within that county to vote at any vote center. Existing vote centers utilize DREs to make available the hundreds, or thousands, of ballot combinations to any voter of that jurisdiction.

² These findings result from a combination of observation and from interviews with each of the two counties' Supervisors of Election and key staff who agreed that more time, staff and space are required.

³ Voter turnout and early voting statistics for the Aug. 2008 and the November 2004 elections for the two counties are included in the body of this report.

with the August primary election, is a cause for concern that voters may encounter long waiting lines as a result of the equipment change.

Election managers in both Hillsborough and Miami-Dade counties are evaluating the experience gained from the new system deployment for the August 2008 primary election. Each county convened a post-election meeting of early voting site managers to share feedback and suggestions for process improvement. Adjustments to the early voting environment currently under consideration include the possibility of adding more locations, staffing and equipment. Additionally, the counties may further publicize the option for voters to cast ballots absentee by mail.

Overview/Background

The objective of traveling to Florida before the August 26, 2008 primary election was to observe and provide a preliminary assessment of the impact to voters in two large Florida counties of the transition from direct record electronic (DRE) touch screens to optical scan paper ballots (op scan) during the early voting period in conjunction with Florida's August 26, 2008 statewide primary election. Although newly enacted Florida law mandated replacement of DRE with op scan voting systems statewide for both early voting and on Election Day⁴, this report focuses on the challenges and consequences of the implementation relative to early voting operations in the populous counties of Dade and Hillsborough and what lessons can be identified and shared with other counties both in Florida and throughout the U.S.

In the past, establishing multiple early voting locations using op scan ballots has generally not been considered a viable option in large urban areas because of the logistics involved with pre-printing and stocking huge quantities of hundreds/thousands of ballot types that may or may not be needed. Consequently, the cost and space constraints were considered prohibitive. Alternately, the availability of appropriate equipment to produce each voter's specific ballot type when a voter appears at an early voting site, or a "ballot on demand" system, has been viewed skeptically primarily due to concerns with the ability of existing op scan systems to timely produce each ballot and process large numbers of early voters at a limited number of sites.

Because Florida law requires counties to offer early voting during a 14-day period in advance of statewide elections and now also requires the use of op scan systems, Florida's initial implementation of "ballot on demand" for early voting at the August 2008 statewide primary election provided the opportunity to observe the impact of this change and to project potential impact in anticipation of the upcoming November 2008 election.

⁴ State legislation enacted in 2007 required all 67 counties in Florida to use optical scan paper ballots for all elections occurring after July 2008 with the exception of allowing retention of a DRE unit at each voting location for use by disabled voters.

The key question this limited observation seeks to answer is whether or not using an op scan “ballot on demand” printing system in the early voting environment, compared with the previous experience utilizing a DRE system, significantly impacts the time it takes to process a voter. The review involves examining administrative processing time and does not attempt to compare voting time, i.e. the time it takes for a voter(s) to mark an op scan ballot versus a DRE ballot in the voting booth. Recent research⁵ comparing voting times between these two types of voting systems found no statistically significant difference.

The two counties involved in this observation, Miami-Dade and Hillsborough (principal city Tampa), were selected due to their large voter populations and because they implemented different types of op scan equipment for early voting. The use of different vendors’ equipment, each with various configurations and features, offered the opportunity to explore the impact of this variable on the time it takes to process voters.

Report Methodology

Information in this report is based on interviews with the Supervisors of Election and key staff in Hillsborough and Dade counties, including several individuals staffing the early voting sites, coupled with limited observation and some direct questioning of dozens of voters participating in early voting in the two counties. Interviews and observation occurred in Hillsborough Co. on Friday, August 22. Interviews occurred in Miami-Dade County on Saturday, August 23 and Sunday, August 24.

HILLSBOROUGH COUNTY

Background/Statistics

Hillsborough County is the fourth largest county in Florida with 650,739 registered voters. For statewide elections, the county establishes 13 early voting sites⁶. Hillsborough was an all DRE county (for Election Day and early voting) until the op scan transition occurred for the August 2008 primary election⁷. The county previously used Sequoia DREs. They switched to the Premier op scan system in April 2008 augmented by the use of Automark op scan ballot marking devices for disability access compliance.

Florida enacted early voting into law in 2002 and since then the popularity of in-person early voting has grown considerably in Hillsborough Co. Additionally, when Florida law changed in 2006 to allow universal, no excuse absentee voting by mail, the number of

⁵ *Electronic Voting Machines versus Traditional Methods: Improved Preference, Similar Performance*. Authors: Everett, S.P., Greene, K.K., Byrne, M.D., Wallach, D.S., Derr, K., Sandler, D, Torous, T. To appear in *Human Factors in Computing Systems: Proceedings of CHI*, 2008, New York: ACM.

⁶ Hillsborough County set up 9 early voting sites for the 2004 primary elections and 11 sites for the November 2004 general election. The number of early voting sites for the November 2008 election has not yet been determined.

⁷ Hillsborough Co. held a very small local election on the new op scan system in April 2008 involving only seven Election Day precincts.

mail voters began to rise significantly. Approximately 35-40% of Hillsborough Co's voters routinely vote early either at one of the early voting sites or via mail ballot. For the August 2008 primary election fully 48% of all ballots were cast prior to Election Day.

In statewide elections over the past four years the overall number of pre Election Day voters has been split approximately evenly between those who voted in-person at an early voting site and those who voted by mail in Hillsborough Co. Since 2006 the county has been publicizing the availability of voting by mail including sending an absentee ballot application form to all registered voters. For the August 2008 primary election the trend veered sharply toward voting by mail with two-thirds of early voters choosing this option (21,155 voted by mail compared with 10,392 voting at early voting sites)⁸. Of the 66,150 voters who cast ballots in the August 2008 primary election, the 10,392 who voted at an in-person early voting site constituted 16% of the voters.

High voter turnout, both on Election Day and during early voting occurred in conjunction with the November 2004 General Election when 86,617 voted at an early voting site. Anticipating a high voter turnout for the November 2008 general election, and assuming approximately 15% will cast ballots at an early voting site, Hillsborough Co. can expect more than 97,000 early voters. This would constitute nine times as many early voters compared with the August 2008 election.

Interviews

I met with Hillsborough Co. Supervisor of Elections Buddy Johnson, General Counsel & Chief of Staff Kathy Harris, Chief Deputy for Information Technology David Parks and several others including early voting staff. Besides the major challenge of transitioning to a new voting system, during the past year Hillsborough Co. also implemented several other new computer systems including a new voter registration system and election management and geographic information systems.

All agreed that it takes somewhat longer to process an early voter using the new op scan system than with DREs due to the ballot printing time. All ballots are bilingual printed in both English and Spanish⁹. For the August 2008 primary election the ballot content fit on one 8 ½" X 11" ballot, either single or double sided depending on the voter's ballot type. For the November 2008 general election, Hillsborough Co. expects ballot content to require two 8 ½" X 14" ballots, double sided. Pre-testing by their technical staff indicated that printing ballots on demand for the primary election required approximately 20 - 30 seconds. Testing is ongoing regarding print time for the longer, two-page ballot that will be needed for the November 2008 election.

Because the op scan system is new, a large sign was posted in each voting booth visually depicting how to color in the oval to make voting selections. This simple, visual sign is

⁸ Due to Hurricane Fay, early voting was suspended for two days which impacted the early vote totals.

⁹ DREs handle multiple languages with an initial screen where the voter selects the language of choice. Thereafter, the ballot content is presented in only the language chosen.

an effective approach to teaching voters the importance of marking the ballot correctly to insure the ballot reader can count each selection. This ballot marking theme was carried out in an advertising campaign. Additionally, a large sign was prominently displayed at the entrance to each early voting site as shown in the photo below.

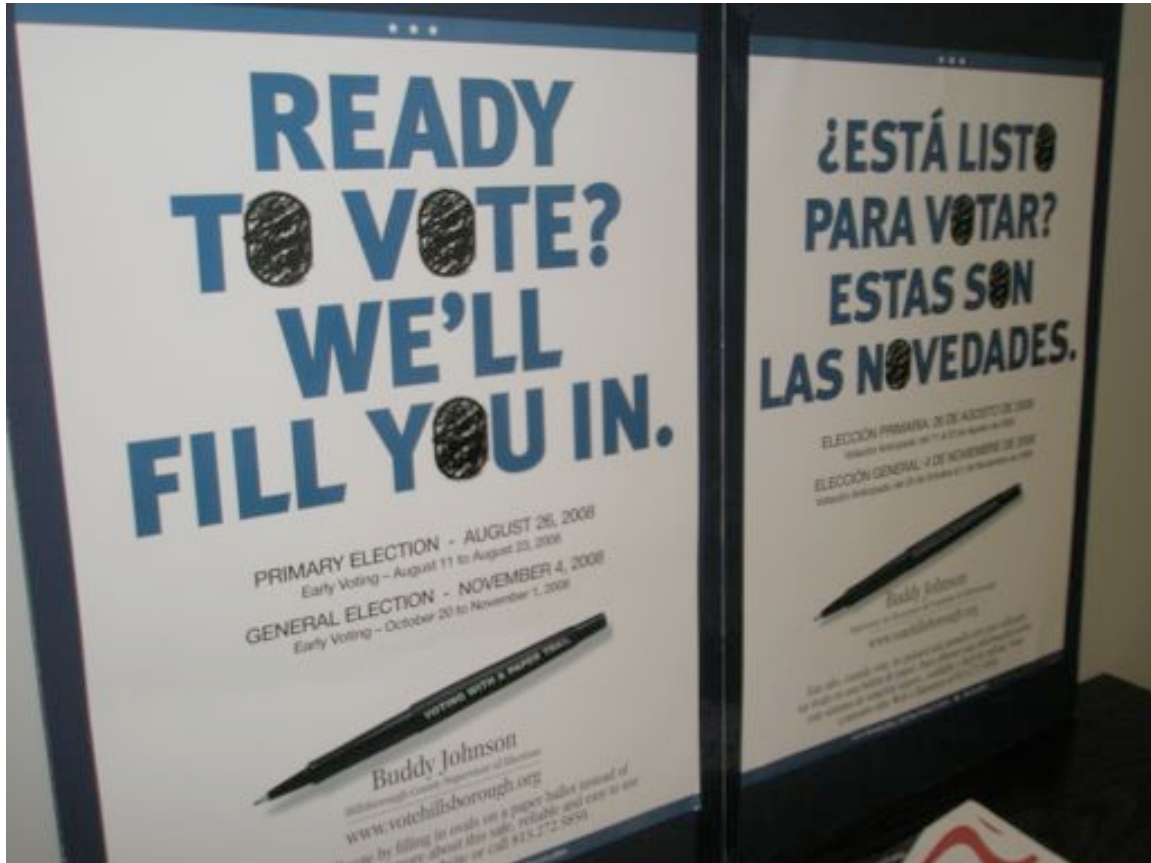


Photo: To show voters how to mark an op scan ballot to assure it will be read correctly by the scanner, Hillsborough Co. instituted a voter education campaign focusing on how to fill in the oval.

Observation

Current Steps to Process a Voter at Early Voting Site

Voter Check-in: One of the new systems implemented in Hillsborough Co. this year is the Electronic Voter Identification system or EVID. It enables speedy location of a voter's record in the voter registration database. At the check-in table, each early voter is asked to present his/her driver's license to one of the clerks staffing the EVID equipment. The driver's license is then swiped through the equipment which reads the magnetic strip similar to a credit card access system. This locates the voter's registration record and signature on file. Next the voter signs in on an electronic signature pad attached to the EVID equipment.

The clerk looks at the voter's record on the EVID monitor/screen and, after verifying the voter's signature matches the one on file, presses "accept" on the screen. The EVID system is attached to a ballot printer which then automatically begins to print the appropriate ballot type for the voter's residence address and, for primary elections, the designated political party ballot¹⁰. Print time was observed to require approximately 20-25 seconds (it took slightly longer if the printer had been idle for awhile). Each early voting location was staffed with two or three check-in clerks who each operated EVID equipment attached to a designated printer beside each clerk; the printer in use is table height. Then the voter is handed his/her ballot inserted into a privacy sleeve.

The voter check-in process in Hillsborough Co. is shown in the pictures below.



Photo: Voters (on left of table) signing in on electronic pad. Check-in Clerks (on right side of table) verify the voter on the EVID monitor. Each clerk uses a designated ballot printer (on the right side of each clerk).

¹⁰ Hillsborough Co. had 1,155 unique ballot styles for this election.



Photo: Check-in table is on the right. Autemark station (for disability access) is in center/back of picture. Other voting booths are pictured on the left.

Voting: The voter is directed to a voting booth where s/he marks the op scan ballot with the pen provided. (If a voter wishes to utilize the disability access features of the Autemark equipment, after the voter's ballot is printed, the voter is directed to take his/her ballot to the Autemark voting station and use the Autemark equipment to make ballot selections. Hillsborough Co. deployed one Autemark per early voting location.)

After marking the ballot, the voter is directed to the op scan reader. The voter is instructed to take his/her ballot out of the privacy sleeve and insert the voted ballot into the scanner. This is a very quick process in Hillsborough Co. as the ballot scanner in use¹¹ has the capacity to be programmed to automatically accept thousands of different ballot types. Therefore, only one scanner is needed per early voting site.¹² If the ballot is

¹¹ Hillsborough Co. uses Premier's ballot scanner. Other major vendors' ballot scanners, including ES&S and Sequoia, have a limited capacity to process multiple ballot types. Such ballot scanners require a designated clerk to input each voter's ballot type onto a monitor attached to the scanner prior to instructing the voter to insert the ballot into the scanner.

¹² Hillsborough Co. uses roving technicians in vans with additional equipment, including scanners, should back-up equipment be needed.

rejected by the scanner, due to detecting an overvote, the voter is offered the choice of receiving a replacement ballot or allowing the ballot to be accepted as is.



Photo: Ballot scanner in Hillsborough Co.

MIAMI-DADE COUNTY

Background/Statistics

Miami-Dade County is the largest county in Florida with 1,170,135 registered voters. For statewide elections, Dade Co. typically establishes 20 early voting sites¹³. Miami-Dade was an all DRE county (for Election Day and early voting) until the op scan transition occurred for the August 2008 primary election. The county previously used ES&S IVotronic DREs and now uses the ES&S op scan system coupled with very limited deployment of IVotronic DREs for disability access compliance.

Since 2002 when Florida law began requiring early voting and since 2006 when state law changed to allow universal, no excuse absentee voting by mail, the percentage of registered voters in Miami-Dade Co. who are choosing to vote prior to Election Day has fluctuated between 32% - 40%. For the November 2004 general election, Miami-Dade Co.'s statistics reveal 309,219 voters cast ballots before Election Day; approximately two-thirds voted at an early voting site compared with voting by mail (208,157 in-person early voters and 101,062 who voted by mail).

Recent trends indicate voting by mail is gaining popularity in the county. Examining the November 2006 General election and the January 2008 Presidential primary election, the number and percent of votes cast before Election Day were evenly split between the two methods. (November 2006: 411,018 total voters of which 66,190 (16%) cast ballots at an early voting site while 64,774 (16%) cast ballots by mail. January 2008: 400,167 total voters of which 66,170 (17%) cast ballots at an early voting site while 66,382 (17%) cast ballots by mail).

However, for the August 2008 primary election statistics reveal the soaring popularity of voting by mail, as almost twice as many pre Election Day voters chose to vote absentee compared with in-person early voting (28,187 early voters versus 51,253 by mail)¹⁴. Therefore, for the August primary election 15% cast ballots at early voting sites, 27% voted by mail and 58% voted on Election Day.

If the percentage of in-person early voters remains at approximately 15% of the county's 1.2 million registered voters, Miami-Dade Co. can expect that the number of early voters for the November 2008 general election would approximate the 208,000 who voted early in the November 2004 general election.

¹³ Dade County is considering expanding the number of early voting sites for the November 2008 General Election although no decision had been finalized at the time of this report.

¹⁴ Like in Hillsborough Co., early voting sites in Miami-Dade Co. were suspended for two days due to Hurricane Fay which impacted the early voting totals.

Interviews

I met with Supervisor of Elections Lester Sola, Chief Deputy Tara Smith, Asst. Deputy of the Voter Services Division Patrick Morris and several other managers as well as early voting staff at two different sites.

All agreed that it takes longer to process an early voter using the new op scan system than with DREs. This is due primarily to the ballot printing time but there is also an impact as a result of the extra step interacting with a clerk at the ballot scanning station. A clerk must input the voter's precinct number prior to the voter inserting his/her voted ballot into the scanner (as described in detail in next section). All ballots in Miami-Dade Co. are trilingual, printed in English, Spanish and Creole. For the August 2008 primary election the ballot content fit on one double-sided 8 ½" X 17" ballot. Printing ballots on demand for the August primary election required approximately 20-25 seconds. For the November 2008 general election, Miami-Dade Co. expects ballot content to require four 8 ½" X 17" ballots, double sided¹⁵. Printing a four-page ballot will require significantly more time than printing a one-page ballot.

As a contingency plan, Miami-Dade Co. stocked a supply of pre-printed ballots for all 849 ballot types. These pre-printed ballots were locked into a large metal container at each early voting site. Due to the low voter turnout for the August primary election, the volume of early voters was handled efficiently by the ballot-on-demand process. Therefore, preprinted ballots were not issued to voters for the August primary election.

Observation

Current Steps to Process a Voter at Early Voting Site

Voter Check-in: Like in Hillsborough Co., Miami-Dade Co. also instituted the Electronic Voter Identification system (EVID) this year which facilitates quicker location of a voter's record in the voter registration database. At the check-in table, each early voter is asked to present his/her driver's license to one of the EVID clerks who swipes it through the equipment to access the voter's record on the EVID monitor. Next the voter signs in on an electronic signature pad attached to the EVID equipment.

The clerk looks at the voter's record on the EVID monitor/screen and, after verifying the voter's signature matches the one on file, presses "accept" on the screen which then activates two printing processes: 1) a small slip of paper containing the voter's precinct number and other identifying information to match up with the ballot, and 2) simultaneous printing of the ballot type for the voter's residence address and, for primary elections, the designated political party ballot¹⁶.

¹⁵ For the November 2004 general election, optical scan ballots, then used only for absentee voting, required up to five 8 ½" X 17" ballots due to a large number of candidate contests and ballot propositions coupled with the requirement to print trilingual ballots.

¹⁶ Miami-Dade Co. had 849 unique ballot styles for this election.

Each early voting site was staffed with three or four check-in clerks who operated the EVID equipment which was networked with two very large ballot printers, each staffed with a clerk. It took approximately 25-30 seconds for the one-page ballot to print on one or the other available printer and for the clerk to insert 1) the ballot into a privacy sleeve and 2) the slip of paper containing the voter's precinct number behind the clear plastic cover on the front of the privacy sleeve.

When multiple voters were checking in, this simultaneous ballot printing and sorting process was more complex to insure the correct ballot was issued to each voter. This set-up also requires more space for the very large printers and separate staffing at each EVID and at each ballot printer (this is not a factor in Hillsborough Co. where each check-in clerk's work station includes an EVID and a printer operated by the same clerk).

Check-in set up in Miami-Dade Co., including EVID, printers and scanners, is shown in the pictures below.



Photo: EVID check-in stations. Ballot printer in background (far right).



Photo: Ballot printer used in Miami-Dade Co.

Voting: The voter is directed to a voting booth where s/he marks the optical scan ballot with the pen provided. (If a voter wishes to utilize the disability access features of the available DRE equipment, the voter must make this request. This would entail the clerk having to spoil the op scan ballot as it was automatically printed after swiping the voter's driver's license through the EVID. Then the DRE activator device is programmed for that voter's ballot type and the voter is directed toward one of several available DREs.)

After marking the op scan ballot, the voter is directed to an op scan reader connected to a ballot box which also has a monitor/screen attached at the top. Each site was equipped with three or four ballot scanners, each individually staffed. The scanner clerk must input the voter's precinct number on the monitor for the scanner to accept a voted ballot as the scanning equipment in use does not have the capacity to be programmed to accept all of the hundreds of different ballot types.

Some scanner clerks asked voters for their precinct number which resulted in confusion and some delay as it is uncommon for voters to know this number. Most scanner clerks asked to see the ballot slip on the outside of the privacy sleeve to read and then input the voter's precinct number onto the monitor. Then the voter was instructed to take his/her ballot out of the privacy sleeve and insert it into the scanner. Afterwards, if the ballot is accepted, either the clerk or the voter touches the "Yes" button on the monitor.

Observation revealed the additional steps of the clerk inputting the precinct number on the monitor followed by the voter inserting the ballot and then pressing “Yes” on the screen to accept the ballot usually required between 7-15 seconds. If the ballot is rejected by the scanner, due to detecting an overvote on one or more contests on the ballot, the voter is offered the choice of receiving a replacement ballot or allowing the ballot to be accepted as is. If the latter, the scanner clerk hits override on the screen and the scanner accepts the ballot.



Photo: Ballot scanners (with monitors attached) shown in back of picture.

Voter Reaction to New Equipment

Overall, this limited observation and interviews with voters reflected findings of past observations, i.e., voters typically do not raise questions or objections no matter what voting equipment they encounter. Some voters expressed surprise with the equipment change despite significant publicity. However, based on discussions with early voting staff and a snapshot view after several hours of personal observation during the last three days of the early voting period, voters were generally satisfied with their experience. Most had no comment about it. With low voter turnout, there were no waiting lines to aggravate voters.

The observation process involved both an active and passive approach. After introducing myself as a research observer, I directly asked some voters: “How was your voting experience today?”

Answers included: “I was surprised that the equipment has changed. I didn’t know about that.” (This was the most prevalent response). “It was fine.” (Numerous responses). “It took me a little longer to vote on the paper ballot because I wanted to be careful not to mark outside of the circle.” “I like it. Voting on paper is better.” “There are way too many steps compared to the touch screens.”

Additionally, I simply listened to other voters’ comments to their companions as they left the early voting sites. Although most didn’t say anything, I did overhear voters make the following comments to companions: “Is this the same system that will be used in November?” “Do you think this will work in November?” “What happened to the touch screens?”

Conclusion

Comparisons between processing time, staffing needs and physical space requirements in an early voting environment using an op scan “ballot on demand” system versus using DRE equipment is based on interviews and limited observation in Hillsborough and Miami-Dade counties as described above and also on my personal experience administering early voting on DREs in Los Angeles Co., California as well as observing early voting on DREs in other California counties over the past several years.

As described extensively earlier in this report, an op scan “ballot on demand” process involves several steps interacting with equipment and multiple clerks. After checking in, the voter must wait for the ballot to be printed. Then, after voting, the voter must insert the ballot into the scanner.

Ballot printing time for the August 2008 primary election in the two Florida counties was observed to require between 20-30 seconds per voter to produce a one-page ballot. After voting, the time needed to scan the ballot varied between the two counties due to different features and functionality of the different vendors’ scanning equipment in use. In Hillsborough Co. the ballot scanning process was virtually instantaneous requiring approximately 1-2 seconds per voter. Conversely, the ballot scanning equipment in Miami-Dade Co. requires the extra step of inputting each voter’s precinct number into a monitor attached to the scanner prior to scanning the voted ballot. Depending on how the scanner clerk requested or accessed the precinct number information, this process was observed to require between 7-15 seconds.

By comparison, when DREs are used the clerk “burns” an access card associated with the voter’s ballot type and issues it to the voter for insertion into the DRE. Burning an access card requires between 2-3 seconds. After casting his/her ballot, the voter returns the reusable voter access card to a clerk.

In addition to requiring more time, managers in both counties described the need for more staffing due to the equipment transition. Miami-Dade revealed a need to increase staffing approximately 40%; additional clerks are needed at each ballot printer and each scanner (2-3 printer and 3-4 scanners were installed at each early voting site). Hillsborough Co. indicated a need to increase staffing by approximately 15% (smaller printers are stationed by each check-in clerk which eliminates the need for designated printer clerks; only one scanner and scanner clerk is needed per site).

More physical space is needed to set up the op scan equipment due to the addition of several ballot printers per site, one or more ballot scanners and a separate, designated disability access unit(s). None of this additional equipment was needed when voting occurred on DREs. The Asst. Deputy in Miami-Dade Co. described the need for “flow coordinators” due to the impact of cross-movement from check-in table to voting booth to ballot scanner. As the voting locations remained the same as in the past¹⁷, the two counties reported various approaches to the need to fit in the new, more space consuming equipment. These include reducing the number of voting booths available by one or more and staging the line of voters outside of the voting room.

Implementing the new EVID system is somewhat of a mitigating factor as it has resulted in a more efficient, speedier voter check-in process. With EVID, each voter presents his/her driver’s license rather than completing paperwork for the clerk to reference to access the voter’s record in the database. However, while the EVID is a time-saving improvement, the more labor-intensive previous paperwork process could be completed while voters waited in line prior to reaching the check-in station. Conversely, time-consuming op scan ballot printing cannot occur until the voter is at the check-in station where his/her driver’s license is swiped into the EVID to read the magnetic strip which identifies the voter’s record in the database.

Supervisors of Elections and their key staff in both Hillsborough and Miami-Dade counties are in the process of evaluating the experience gained from the new system deployment for the August 2008 primary election. While not directly observed, there are numerous other large counties in Florida that made the same transition during the August primary election. Due to low voter turnout, the opportunity to gather lessons learned occurred without the glare of outside scrutiny. With anticipated high voter turnout for the upcoming November 2008 general election, early voting sites can expect a sevenfold or greater increase in the number of voters needing to be served. Consequently, due to the significant increase in time it takes to process each early voter using the op scan ballot on demand system, adjustments to the early voting environment will undoubtedly need to be made to accommodate high voter volume.

¹⁷ Florida law limits the type of locations which can be used to specified government offices such as libraries and city halls.

