Critique and Corrections to the June 2005 Election Commissioners' Association Report on Voting Technology

July 20, 2005

In June, 2005, the Election Commissioners' Association (ECA) of the State of New York released a report entitled "A Review of Voting Machine Systems for the replacement of the AVM in New York State." Unfortunately, this report is seriously flawed and contains incomplete, misleading and incorrect information. It exaggerates the costs of precinct based optical scan systems and underestimates the cost of full face ballot touchscreen/pushbutton electronic voting machines (DREs).

We find the following serious problems with the ECA report:

1. There are outright errors, omissions, and misstatements, which always cast DREs in a more favorable light than scanners.
2. There is no coordination between the DRE and Optical Scan sections to make sure they were working with equivalent data in order to provide a fair and unbiased comparison. It leaves the reader with the impression that there are costs associated with Optical Scanners that do not apply for DREs. But the experience throughout the country is that the costs of DREs are considerably higher than precinct based optical scan systems, and a minimum of fact checking would have borne this out.
3. The ECA report does not address any of the many documented operational problems with the use of DREs in actual elections. (VerifiedVoting.org has a 51-page report detailing a litany of DRE failures.[1]). How can a report intended aid the equipment selection process fail to even mention the recurring problems and failures of DREs in real elections, and the concerns expressed by thousands of computer professionals about the potential security issues with DRE systems?
4. The ECA report implies that the DREs cited meet New York State Election Law requirements. However, none of the DREs currently being demonstrated in New York provide voter verified paper ballot (VVPB) capability for the visually impaired and may not comply with HAVA requirements. While all full face DREs under consideration must have the VVPB required by the recently passed NY State law, some vendors have not even demonstrated a working machine with this feature. But the ECA report fails to even note this fact.

The ECA Review is divided in two sections, a DRE Review section and an Optical Scan Review Section. As noted above, there is no coordination between the DRE and Optical Scan section to ensure that the two sections are using equivalent data. In order for the document to be useful for comparison purposes, the evaluated criteria for both systems must be identical. But repeatedly, as noted in the following analysis, optical scanners are held to a different standard than DREs. Costs and conditions noted for scanners are not mentioned at all for DREs, even though they have identical or higher costs. This flawed comparison criteria alone calls the value of the ECA Review into question.

On the following pages we note and rebut some of the many errors, misstatements, and omissions in the ECA Review of Voting Machine Systems.

New Yorkers need to have the highest confidence in the integrity of the voting process. We demand a verifiable paper record of our vote. We demand a transparent voting process free of vendor control. We demand complete recount and audit capability. We demand that the election commissioners are held accountable for the choices they make regarding the purchase of voting equipment, the accurate use of that equipment, and the transparency of the voting process in all future elections.

New Yorkers need to have the highest confidence in the integrity of the voting process. We must use voting technology that creates a paper trail verifiable during the voting process, does not ultimately depend on technology, and, if necessary, can be recounted independent of technology. Precinct based optical scan systems meets these requirements; DREs do not.

On the following pages we note and rebut some of the many errors, misstatements, and omissions in the ECA Review of Voting Machine Systems.

[1] VerifiedVoting.org, "Electronic Miscounts and Malfunctions in Recent Elections," http://www.verifiedvotingfoundation.org/downloads/resources/documents/ElectronicsInRecentElections.pdf.

Errors in the ECA Review DRE Section

1) ECA Review, Page 5 — on replacement ratios of DREs to Lever Machines:

"A one-for-one replacement ratio may not be necessary. ***Perhaps a full-face electronic display machine can replace our lever machines at a two-for-three ratio****. Where practical at a given poll site every three lever machines would be replaced with only two new machines."*

NYVV response: There is no evidence that voting on DREs is faster than voting on our present lever machines. Nor does the report give any references or criteria to justify this highly questionable claim. The assumption that voting on a DRE will take *less time* than voting on a lever machine simply cannot be so. Why? Because the DREs required by New York State must have a voter verified paper ballot (VVPB) which must be checked by the voter for accuracy before leaving the machine. Even assuming that it takes about the same amount of time to cast a vote on a lever machine as it does on a DRE (on one the voter pulls levers and on the other they push buttons or a touchscreen), it is an indisputable fact that the printing and verifying the VVPB is *an additional step not present on a lever machine*. Therefore, it simply cannot be the case that it takes less time to complete the process of voting on a DRE, it must take more time. Indeed, experience in other states – especially in Florida, points to a minimum DRE voting time of 3 minutes or more per voter even without a VVPB.

Since it takes more time to vote on a DRE than it does on a lever machine, then *more DREs will be required than the current number of lever machines.* In other words, the suggestion that DREs can replace lever machines at a two for three ratio is not only flawed, the exact opposite may well be the case. *3 DREs may be required for every 2 lever machines.*

2) ECA Review, Page 6 — on the costs of required DRE modifications:

"DRE's will have to have some modifications to meet the needs of counties throughout New York State... A cost associated with this item cannot be determined at this time."

NYVV response: Here the report essentially concedes that the costs it quotes for DRE acquisition are meaningless, as there will be additional costs in any case. But then the report proceeds to use a range from $6,000 - $8,000 for DREs as if this were the actual purchase cost. How can this be valid when they have just said that costs of required modifications cannot be determined?

There are no references or sources for machine costs quoted in the report. A New York advocate for the disabled was told by Sequoia that a full-face voting system, equipped with voter-verifiable paper trail and vision-impaired voter-verifiable paper trail (required by HAVA) would cost nearly $12,000 each. This is well above the cost figures in the ECA report.

If the numbers in the ECA report are to be convincing, then it must supply sample quotations or letters from voting system vendors for DREs that are fully compliant with New York State election law, and provide a fully accessible voter verified paper ballot as required by HAVA.

3) ECA Review, Page 6 — DRE Storage

"*The average DRE in a closed position is 6.6 square feet and when opened averages 20.15 square feet."*

NYVV response: Using the average size of a DRE is not appropriate here, since the counties will need to store DREs of one size, not some small ones and some large ones. The sizes of the DREs under consideration are well known to the authors of the report, and they are not small by any stretch of the imagination.

Also, using square footage is a highly misleading way to calculate the amount of required storage. Because DREs cannot be stacked in storage, but optical scanners can, up to ten stacked optical scanners can be stored in less space than a single DRE. 5 square feet of storage space can store as many as ten optical scanners while 7 square feet of space is required for a single DRE.

4) ECA Review, Page 8 — DRE **Portable Memory Device Storage**

"*If your county is going to secure the portable memory devices in cabinets, then 12 square feet per cabinet is required.* ***It is a fair estimate that each cabinet be able to store 300 to 750 portable memory devices****."*

NYVV response: It can be assumed that the portable memory devices used here will be industry standards such as disks, memory cards, or memory sticks. All of these are very small in physical size. While the number of memory devices that fit into a fire proof cabinet is quoted as being 300 to 750 for DREs, the number used for optical scanners later in the report is 50 devices per cabinet (2 cabinets for each 100 devices)!

Here we see an example of a biased comparison used in the ECA report. DREs and Optical Scanners have exactly the same type and number of portable memory devices. But the report states that storage requirements for the optical scan memory devices is up to 15 times higher than for DREs!

5) ECA Review, Page 10 — DRE **Shipping Costs**

"The cost may vary within New York State. Each county needs to obtain pricing and contracts from various moving companies for transporting voting machines and supplies. ***Some counties may desire to have their own "in house" transportation system in place rather than going to an outside vendor."***

NYVV response: The size and weight of most of the full face DREs under consideration requires that they be moved by professional movers with the appropriate insurance. The fact that this needs to be done only 3 times per year makes it highly unlikely that the counties will be able to finance their own in-house transportation system, and will be forced to pay the very high prices charged by professional movers.

6) ECA Review, Page 11 — DRE **Training Costs**

"*Training will have to be conducted on ballot preparation, writing to a cartridge and retrieving election night tally information. This will require development and implementation. At the present* ***time no dollar value can be associated with this task."***

NYVV response: It is interesting that for optical scanners later in the report, while no actual cost is mentioned, the term used to describe the need for training of office staff and poll workers is *"much overtime."* This is inaccurate and extremely misleading as the experience in other states is that the cost for training on DREs has skyrocketed, much surpassing the anticipated cost (see the Miami-Dade County report[2]). But states using paper ballots and optical scanners quote times of "less than an hour" or "just a short time" for training office staff[3].

Again we see the biased nature of the ECA report in favor of DREs. DREs are given a pass ("no dollar valued can be associated with this task") but for optical scanners the worst is implied ("much overtime").

7) ECA Review, Page 11 — DRE Cost of Licenses

"*Licenses for the use of the voting system will be part of the procurement and will have a cost associated. Prices for these systems vary from vendor to vendor.* ***The price or scope of this effort is not known at this time, but the cost will be incurred at the earliest stages of the procurement."***

NYVV response: Licensing and maintenance costs will be part of the initial purchase and are typically formulated as a certain number of free tech support hours built in to the initial purchase cost plus a fixed cost for the license. But states which have adopted DREs are finding that the built in service costs are often not sufficient to cover the actual hours of vendor maintenance needed. In Miami-Dade County, the 400 free service hours negotiated in the purchase contract were used up by the end of the first year[4]. All additional vendor support was billed extra, sometimes at a rate of as much as $1,100 per hour per person!

In addition, after the first 5 year contract expires, the cost for licensing and vendor support will revert in full to the counties. No mention is made of this potentially huge and recurring cost to the counties.

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[2] New Yorkers for Verified voting, "Miami Dade County Officials Recommend Scrapping DRE system for Optical Scanners," http://nyvv.org/reports/MiamiDadeDumpsDREs.pdf.

[3] New Yorkers for Verified Voting, "Optical Scan Survey Results," http://nyvv.org/reports/OptScanSurvey.pdf.

[4] New Yorkers for Verified voting, "Miami Dade County Officials Recommend Scrapping DRE system for Optical Scanners," http://nyvv.org/reports/MiamiDadeDumpsDREs.pdf.

8) ECA Review, DRE Section Omits Paper Ballot Printing Costs

At no point in the section on DREs is there a number or a cost quoted for the printing of paper ballots. This is inaccurate and misleading, as of course paper ballots must still be printed in sufficient numbers for use as for absentee and affidavit ballots. Additionally, sufficient emergency paper ballots must be printed so that voting can continue in case of failure of a DRE, a common occurrence, particularly for touchscreen style DREs.

In the report section on optical scanners ballot printing costs based on a percentage of registered voters (usually 100% to 110%) is quoted as part of the expected cost of running the election. This should be the case also for DREs, which will need fewer, printed ballots, but will need them. Since many counties already print absentee ballots for about 15% of registered voters, and DREs will require even more for emergencies. Thus a DRE system will need ballots printed for at least 25% of registered voters.

This cost appears nowhere in the DRE section. The implication is that there are no ballot printing costs for DREs, this is obviously untrue.

Errors in the ECA Review Optical Scan Section

1) ECA Review, Page 11 — Number of Scanners Needed

"*Poll site scanners are used in a number of states and in these states multiple precinct/election districts are considered normal. For use in this review the following methodology will be used. Election Day is 15 hours long that equates into 900 available minutes for voting.* ***Taking an average of 30 seconds per ballot to have the scanner read and record each ballot that leaves a maximum number of votes at 1800 per machine."***

NYVV response: The optical scanners currently on the market *scan a ballot in 1-3 seconds, not in 30 seconds as quoted in the report*. This fundamental fact about scanners could have easily been checked with states that use the system[5], or by observing a scanner in operation. Since optical scanners have been demonstrated in New York since February 2005, and the speed of scanning ballot is obvious, it is very hard to understand how this bloated 30 second scan time could have been arrived at.

The figure of 30 seconds per ballot for scanning is too long by a factor of 10 or more. This flawed average scanning time is used to produce a requirement for an excessive number of scanners. Since the actual average time to scan a ballot is at most 3 seconds, the formula used means that a single Optical Scanner can accommodate 4 -5 voting districts (or one per polling place in most cases). This is born out be the experience of other states over the last 20 years. How did the ECA report arrive at this erroneous estimate, and why was no fact checking done?

2) ECA Review, Page 11 — Price of Privacy Booths

"*The price average for numbers of 1 to 250 units (privacy booths) is $235 per unit including shipping. A recommended number per election district is three booths"*

NYVV response: One privacy booths should be purchased at a minimum to replace each existing lever machines. Since the cost per booth is so low, it is reasonable to have additional ones on hand, although the reports assumption that 3 privacy booths are required per lever machine is incorrect. The price per privacy booth quoted in a optical scan vendor's contract with the state of Michigan is $160 per booth, not the $235 used in the ECA report.

Since NY State would buy many more booths, there is no reason to doubt that the same or an even lower price could be negotiated.

[5] Indeed, in the survey NYVV did of states using optical scanners we asked this question and where consistently told that the time it takes to scan a ballot is extremely fast: New Yorkers for Verified Voting, "Optical Scan Survey Results," http://nyvv.org/reports/OptScanSurvey.pdf.

3) ECA Review, Page 11 — Federal Certification of Voter Assistance Devices

"*HAVA requires that voters with disabilities have the opportunity to vote in a private manner. In order for a paper based system to be compliant with HAVA each poll site will require an additional voter assistance device to aid the voter with disabilities to mark the ballot without assistance from election workers. Several municipalities have purchased the leading device at $5400 to $5500 per unit.*
As of June 1, 2005 one has not been certified for use by the federal government.*"*

NYVV response: The Automark ballot marking device, which enables disabled voters to vote privately and independently using an optical scan paper ballot, is at this time fully federally certified. Incidentally, none of the full face ballot VVPB DREs being considered for New York State are presently federally certified.

4) ECA Review, Page 16 — Optical Scan Software Costs

*"In order to test, set-up and print canvass reports there will be a vendor supplied software package that will be necessary to run the optical scan system**. Depending on the state negotiations and the vendors the typical price for a standard system is in the range of $25,000- $65,000.** There will be a continuing maintenance/upgrade fee that is standard in the industry. As of yet that cannot be established prior to a final system specification made by the legislature and the New York State Board of Elections."*

NYVV response: Once again a cost quoted for optical scanners is omitted for DREs. DREs also require additional software to program ballots. Most states using DREs also pay for pre-programmed test cartridges to perform Logic and Accuracy tests. The software expense for DRE systems is equivalent to the cost of similar software for optical scan systems, but this is not noted anywhere in the report!

Why is a dollar cost for scanners quoted here while no equivalent cost is noted for DREs?

6) ECA Review, Page 16 — Optical Scan Costs of Full Face Ballot

"*Because of New York State's full-face requirement the ballot has more columns, which adds to ballot cost."*

NYVV response: We have spoken to printers who assure us that with modern computerized printing this is not a significant cost factor. Also, a full face ballot requires that the ballot be printed on one side of the ballot only. Other states use both sides of the ballot. It costs more to setup and print two sides of a page than it does one side.

7) ECA Review, Page 17 — Optical Scan Ballot Printing Costs

"*In conjunction with the New York City Board of Elections a number of surveys were sent to other states. The result was a range of ballot costs. This report will take an actual "real word" range to assist in a cost comparison. Costs in the survey ranged **from .25 to .75 per ballot**. In two cases when printers were contacted by phone, the ballot explained the costs went to an average for a general election of approximately .50 per ballot. **Costs for lower number of ballots may if other states are used as a comparison increase to .85 cents for small quantities."***

NYVV response: We have had estimates of approximately 30¢ per optical scan ballots from several sources[6]. These include Dayton Legal Blank, Dayton, OH, who sent us an estimate of 29¢ based on an actual New York State optical scan absentee ballot from the 2004 election. The quote was for Schenectady County, and assumed that they need 128 different ballot styles, one for each Election District. Others who gave us this number are ES&S (Election Systems and Software) and Fidlar Doubleday. These companies print millions of ballots in the Midwest.[7]

[6] New Yorkers for Verified Voting, "Paper Ballot Costs and Printing," http://nyvv.org/reports/PaperBallotPrintingCosts.pdf.
[7] New Yorkers for Verified Voting, "Paper Ballot Costs and Printing," http://nyvv.org/reports/PaperBallotPrintingCosts.pdf.

8) ECA Review, Page 17 — Optical Scan Ballot Printing Costs

"It should be noted that New York State's printing market is considerably different than other states. A true cost comparison should be weighted heavily on the market conditions in New York. New York State's election printing market, as it is driven by the official political calendar and current NYSEL, is both involved and time sensitive."

NYVV response: All states have official political calendars and specific election law requirements that place constraints on ballot printing. Yet, 46% of counties [8] around the United States successfully use optical scanners and manage to get their ballots printed on time. It is incorrect to assume that New York has such unique requirements that printing of paper ballots is prohibitive. After all, New York has managed to print absentee and affidavit ballots in a timely fashion for decades.

Another point is that the "election printing market" in New York is dominated by two ballot printers, both of whom have a vested interest in selling DREs – one is trying to sell their own DRE, the other is under contract with one of the DRE vendors. Thus both currently certified ballot printers have an interest in keeping the cost for paper ballots high. With a complete change in the way we vote in NY State, this is the time to open up the certification and bidding process to other, independent printers.

With competitive bidding, there is good reason to believe that New York ballot printing costs would be 29¢ or less, including paper and printing. If the state were to designate and certify printers around the state to print optical scan ballots, the quantities of scale for New York's 11 million voters would ensure low ballot costs. Many printers would love to be able to bid competitively for a portion of New York States optical scan ballots.

9) ECA Review, Page 18 — Optical Scanner Storage

***"As there will be a requirement to test the scanner on a periodic basis it would be preferable to store the ballot box with the scanner as to provide a ready platform for testing and maintenance**. The storage of the machine will require a minimum of 6.6 square feet per scanner with attached ballot box. Taking into account access will be needed for testing and battery charging a minimum working area of three feet between machines should to planned for."*

NYVV response: This is another example of holding optical scanners to a standard that is not asked of DREs. This statement requires each scanner to be stored in what is essentially its full working position in order that it can be tested. Yet the DRE section allows DREs to be stored folded up and brought out to a working area for testing. Of course scanners can be easily brought out to a working area for testing, but they are being held to a different standard in the biased ECA report.

The only reason to store scanners as described by the ECA report is to artificially inflate their storage space requirements. It would be much more efficient and cost effective to store them as other states do – separate from the ballot box, in their hard shell transport cases, stacked as many as 6 or even 10 high. When testing is required, it is a simple matter to place a single ballot box out in the working area, bring each scanner over and test it. This is the testing methodology the report implies for DREs--why not use the same approach for scanners?

Since only the scanner and ballot marking device will need to be stored in a climate controlled space, it is much more likely that the equipment will be stored – stacked up to 6 or 10 high - on shelves or in cabinets, while the ballot boxes will be stored in a less expensive (not climate controlled) space. In fact, the ballot boxes could remain in a storage space at the polling place, or an unheated storage area, just as lever machines are now stored.

Scanners will be taken out of storage to a workbench for maintenance and testing, and returned to storage thereafter. At a weight of about 20 lb per machine, this will be easy to do and much more cost effective than the unnecessary and expensive method suggested in the ECA report.

A workbench will be used to do scanner maintenance and testing by pulling the equipment off the shelves and returning it there when finished. At the weight of about 20 lb. per machine, this will be easy to do and much more cost effective than the unnecessary and expensive method suggested in the ECA report.

[8] Election Data Services. "Voting Equipment Summary by Type as of 11/02/2004." http://www.electiondataservices.com/VotingSummary2004_20040805.pdf.

10) ECA Review, Page 18 — Memory Device Storage

"*Memory Devices: As the scanners read the results onto a memory device that requires they be maintained in a fireproof storage cabinet on site with the scanners. Cost of a 37"x22"x52" fireproof cabinet is $4,000 - $4,500 each.* ***Two cabinets are needed for every 100 machines."***

NYVV response: As noted in our comment in the DRE section above, here we see an example of the biased comparisons used in the ECA report. DREs and Optical Scanners require exactly the same type and number of portable memory devices. Yet the report states that optical scan memory devices take up to 15 times as much volume as those for DREs!

The portable memory devices used here will be industry standards such as disks, memory cards, or memory sticks. All of these are physically small. While the number of DRE memory devices that fit into a fireproof cabinet is quoted as being 300 to 750, the number used for optical scanners later in the report is 50 devices per cabinet!

How did such a basic and serious error make its way into the ECA report?

11) ECA Review, Page 18 — Warranty Costs

"*Post warranty costs* [for maintenance of the scanner] *were obtained from the State of Michigan put per unit cost of post warranty at around $133 to $153 per year."*

NYVV response: Once again, here is a detailed cost for optical scanners, while none is available for DREs. The expected costs for optical scanners, based and years of experience and extensive use nationwide is easily predictable. But most of the corresponding costs for DREs are not available. This should give those who consider the purchase of DREs for their counties reason for concern.

As seen in Miami-Dade County in Florida and many other counties around the country that chose DREs in the last few years, the actual post warranty costs tend to be considerable higher than those initially projected, thus leading to serious cost overruns. These unanticipated costs will need to be borne by the individual counties.

12) ECA Review, Page 19 — Poll Site Delivery Costs

"A general state cost range from the committee's local survey ranged from $50.00 to $90.00 per machine per election*. If federal funds are available it may be more cost effective for boards to purchase trailers at approximately $7000.00 to $10,000.00 a piece and deliver the machines themselves if other county departments' equipment could be used for drawing them."*

NYVV response: Again, a detailed cost is quoted for optical scanners where none is quoted for DREs. The costs are inflated since the small size of the scanners and marking devices allows transport by county workers in already available vehicles such as vans and station wagons rather than by the professional movers who will need to move the DREs.

13) ECA Review, Page 19 — Training Costs

"It is safe to speculate there will be a quadrupling of present training time and cost including weekend and evening time slots."

NYVV response: Once again we see a large cost quoted for scanners where none is quoted for DREs. Experience in other states using optical scanners shows that training is extremely easy and that voters, poll workers, and supervisors have no trouble understanding and using the system. Why then, is it "safe to speculate" that the training time will be "quadrupling" and costs will include "weekend and evening time slots" when no other states report this difficulty? This alarming language is not used with the DREs, but the experience in other states tells us that DREs are much more difficult for voters and poll workers to learn to use.

Training time for DREs, based on the experiences in other states, is much higher, requiring the introduction of many elderly poll workers to computers, something they do not routinely use in their daily lives. In many instances, those poll workers have simply refused to continue serving, instead of dealing with the new, often highly problematic technology.

Experience in other states using precinct based optical scanners does not support the ECA review statement which implies extraordinary costs for training. Optical scan technology is easy and intuitive, and is not difficult for pollworkers to learn. DREs, however, are difficult and training costs can be reasonably expected to quadruple present training time and cost including weekend and evening time slots.

14) ECA Review, Page 19 — Administrative Change Costs

"*The current AVM operational model will for a large part change. This may require new board policies and administrative procedures.* ***In just the way elections will be handled in respect to an "all paper" election makes it hard to predict with accuracy the cost implications.*** *As reviewed in the preceding sections storage, canvassing, security and delivery and pick-up will change the board's pre and post Election Day operations. Included into this will be a new operations model for poll site operations as required by the handing out of paper ballots and the necessity to control them."*

NYVV response: As detailed in the ECA Review optical scanner section and by NYVV, cost projections for precinct based Optical Scan systems are much more precisely predictable than for the DREs, where there is no experience base with the type of DREs New York State requires to draw on. Other states are not dealing with the extremely large full faced ballot DREs required by New York and the few NY townships currently using the *paperless* full faced ballot DREs in New York State do not yet have the required VVPB capability.

15) ECA Review, Page 20 — Price Breakdown to Replace One Voting Machine

NYVV response: The table on this page gives a very inaccurate and demonstrably false picture of the costs for optical scan systems. In the first place, it implies that there is a one to one replacement of optical scanners/ballot markers to lever machines. This is false. As noted above, a single optical scanner can serve up to five lever machines in a single polling place. This is not in dispute, as it is normal practice in states already using optical scanners. But the table implies that a county must purchase one scanner and one ballot marker for each lever machine. Nothing could be further from the truth.

Even with the overly conservative estimate of only two precincts per optical scanner which even the ECA report concludes is acceptable (see comments above), the cost in multiple Election District/Lever Machine polling places, which are in the majority in larger counties, would be cut almost in half for the equipment. The table gives a false impression of the costs of lever machine replacement for these precincts.

Another mistake in the table is the assumption that three privacy booths are needed to replace each lever machine. One privacy booth replaces one lever machine. Given their low cost, it is reasonable and acceptable to add additional booths in case of unanticipated heavy voter turnout, but it is not required as implied in the table.

Finally, the cost of printing ballots is included in the replacement cost of the voting machine, a basic accounting error. This confuses up front purchase costs with annual ongoing costs. They do not belong in the same table. Ballot printing costs are ongoing expenses, as are training, storage, transportation, and other costs.

Again we have the apples and oranges comparison between the two technologies. DREs also have ongoing annual expenses, including ballot printing costs, but they are not included in the DRE section as part of the acquisition cost. They should not be put in this table to artificially inflate the cost of acquiring optical scanners.