Comments to
The United States
Election Assistance Commission
on
Proposed Voluntary Voting System Guidelines

September 2005

With Reference to MDERC’s May 2005 report
“GET IT RIGHT THE FIRST TIME
Poll Closing Observation,
Ballot Accounting, and Electronic Voting Security”

www.reformcoalition.org

www.reformcoalition.org
4500 Biscayne Blvd., Suite 340 Miami, FL 33137
1 Introduction

The Miami–Dade Election Reform Coalition (MDERC or The Coalition)\(^1\) observed poll-closing procedures in Miami–Dade County in the November 2004 Presidential election, and reported its findings in *GET IT RIGHT THE FIRST TIME; Poll Closing Observation, Ballot Accounting, and Electronic Voting Security* http://www.reformcoalition.org/Ressources/GetItRightTheFirstTime.pdf together with its *Appendices* http://www.reformcoalition.org/Ressources/GetItRightAppendices.pdf Three members of The Coalition, Professor Martha Mahoney, Dan McCrea, and Edmund Campbell gave oral testimony on its findings, in New York, on 30 June 2005, and presented copies of the report to The Commission. These Comments are further to that testimony.\(^2\)

Our comments will address several issues. First we think the Voluntary Voting System Guidelines (VVSG or Guidelines) are too narrowly focused and do not take into account critical election administration issues that are vitally important to running a credible and secure election using DRE technology. Second, our comments demonstrate the critical need to incorporate proper ballot accounting procedures into the guidelines, particularly for elections run using DREs. Third, the VVSG entirely ignore the problems of Early Voting. Indeed the issue is never addressed in the critical hardware, software and security sections of the VVSG. Finally in Section 6 we have additional comments on particular problems with individual sections in the proposed Guidelines that focus on hardware and software issues.

---

\(^1\) The Miami–Dade Election Reform Coalition (MDERC or “the Coalition”) is non-profit Florida corporation and is a non-partisan, broad-based coalition of organizations and individuals dedicated to election reform. Our mission is to protect the rights of every voter to cast a ballot and to have that ballot accurately recorded and counted. We formed by spontaneous combustion in the wake of the collapsed September 2002 Primary Election in Miami–Dade County, Florida and have met weekly ever since. For more information, visit our website at www.reformcoalition.org.

\(^2\) Professor Mahoney has submitted her own comments separately
2 The Scope of The Guidelines

2.1 The Scope of The Guidelines is too narrow and limited

These comments address the objectives, and scope of the VVSG as set forth in Sections 1.1 and 2.2. In light of these comments, we also call upon EAC to reexamine the definitions in 1.5, 1.5.1, 1.5.3 and the glossary definition of voting system in Appendix A.

Our poll closing observation work has influenced our comments on many provisions of the guidelines. Of premier importance is our belief that the objectives and scope of the draft VVSG are too narrowly conceived from a functional perspective. This is especially true for elections run using DREs. As we explain in Section 3 proper ballot accounting procedures are an essential component of an election run on DREs. Without these procedures, election results cannot be trusted, especially in close races. Ballot accounting must be addressed in The Guidelines, as part of an expanded scope.

In assessing the VVSG we submit that the EAC has construed its objectives too narrowly by drawing a tight circumference around the hardware and software issues for voting systems and by failing to analyze how the hardware and software actually operate when used in elections. The VVSG wrongly establish a bright line between voting technology and election administration; this improperly isolates the latter from specific consideration to the detriment of the former. This can be a fatal error, as our report, Get it Right the First Time, makes clear.

Election administrators using complex DRE technology cannot view administration and system technology as separate categories; rather they need to know that the two are inextricably intertwined. Both sound considerations of law and policy argue that EAC include in the scope of The Guidelines how DREs are used in the real world. This will require a detailed examination of the interrelationship between DREs and the environment in which they are operated. The Guidelines must address how election officials use these machines to run an election and what types of problems are routinely encountered. In particular, The Guidelines must incorporate sound ballot accounting procedures that ensure ballots are properly accounted for before tabulation commences.
2.2 Supporting Authority

HAVA itself requires the Commission to broaden its vision. Section 301(b) of the Act offers an expansive definition of a voting system. That provision defines a voting system as:

(1) the total combination of mechanical, electromechanical, or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used:

(A) to define ballots;

(B) to cast and count votes;

(C) to report or display election results; and

(D) to maintain and produce any audit trail information; and

(2) the practices and associated documentation used--

(A) to identify system components and versions of such components;

(B) to test the system during its development and maintenance;

(C) to maintain records of system errors and defects;

(D) to determine specific system changes to be made to a system after the initial qualification of the system; and

(E) to make available any materials to the voter (such as notices, instructions, forms, or paper ballots).

Section 301(b)(1) states that the system is to include "documentation required to program, control and support the equipment (B) to cast and count votes; [and] (C) to report or display election results." Section 301(b)(2)(C) further stipulates that a voting system should include the practices and associated documentation used (C) to maintain records of system errors and defects..." These provisions certainly support broadening the objectives of the guidelines to focus on proper ballot accounting procedures and the documentation necessary to ensure that election results are trustworthy.

In particular, these provisions of HAVA should force EAC to reconsider this statement in Section 1.1:

The Guidelines are not intended to define appropriate election administration practices. However, the total integrity of the election process can only be ensured if the use of
voting systems certified to these Guidelines is coupled with effective election administration practices.

A broader focus is clearly within the ambit of Section 301(b) and this cramped reading in Section 1.1 should be discarded. At a minimum, the Guidelines must specify effective procedures to ensure proper ballot accounting.

Other policy considerations support enlarging the scope of the VVSG. In particular, EAC should broaden the reach of the guidelines because they are a primary resource for local and state election officials. The failure to address the interlocking relationship between technology and administrative issues will have numerous deleterious results. First, less sophisticated jurisdictions will not appreciate the complexity of these systems if they assess DREs based on an examination of the draft VVSG. Second, many election supervisors will not understand the administrative burdens that operating a DRE system impose on their staff. Broadened guidance will be an invaluable tool for these officials.

This point is supported by the National Research Council’s recent report, * Asking the Right Questions about Electronic Voting* [hereinafter NRC Report]³

In a preliminary draft issued on September 9, 2005 the NRC Report raises two critical questions about election administration and DREs:

6-16. How can election officials obtain sources of information about electronic voting systems other than the sources provided by vendors?
6-17. How can election officials obtain the knowledge and information needed to respond to and manage change effectively?

NRC Report at 6–8 & 6–9. These VVSG are obviously of central importance in providing this critical guidance. Because HAVA has entrusted EAC with the duty of aiding state and local officials in administering elections, we urge EAC to listen to the views of the National Academy and rewrite the guidelines with these officials in mind.

A second section of the VVSG needs to be broadened. Section 2.2 on Overall System Capabilities is too narrowly drawn. It does not include two key system functionalities that should be made expressly mandatory for DREs.

---

³ The report’s purpose is “to describe some of the important questions and issues that election officials, policy makers, and informed citizens should ask about the use of computers and information technology in the entire electoral process, thus focusing the debate on technical and policy issues that need resolving.” Preface at vii.
First it does not specify that a system should ensure that each cast ballot is counted and counted only once. The NRC report expressly makes this principle a desideratum for Elections in Section 2.3. It states: “All cast ballots should be counted accurately.”

This is the lodestar of a successful voting system and the inclusion of this as an express goal is essential to these guidelines. Its continuing absence will mean that critical measures necessary for a trusted election will be missing from the VVSG.

A second part of Section 2.2 needs to be broadened. This section does not expressly ensure that the DRE software contain sufficient alerts to poll workers of machine malfunction. Vendors need to install software that clearly, unambiguously, and immediately informs election officials that an error has occurred. As the discussion of Precinct 816 in Get It Right the First Time makes clear, the DREs stuffed the ballot box without the vendor’s software alerting poll workers to this problem. Similarly, the NRC Report recommends that software needs to be designed to prevent such occurrences. See discussion point 5–9 on page 5–5, and Section 5 of these comments.

\footnote{NRC Report at 2–3.}
3 Ballot Accounting

Without proper ballot accounting, elections are baseless, untethered sets of numbers. The proposed Guidelines fail to address ballot accounting at all. The current scope of The Guidelines expressly excludes administrative practices and ballot accounting could be considered within the realm of administrative practices. But guidelines that allow baseless elections are certainly incomplete.

As we argue throughout, The Guideline’s scope must be broadened to include administrative practices because they are integral to the performance of the hardware and software scope currently addressed by the proposed Guidelines. Ballot accounting is a specific example of an essential administrative practice that, if excluded, renders The Guidelines incomplete and fatally flawed. The scope must be broadened to address ballot accounting and other administrative practices essential to the successful use of hardware and software.

3.1 Ballot Accounting Defined

First, “accounting” defined from Merriam Webster’s Online Dictionary:

Function: noun
1 : the system of recording and summarizing business and financial transactions and analyzing, verifying, and reporting the results

Second, “ballot accounting” defined by MDERC for the sound conduct of elections:

The precinct-level system of verifying the number of ballots cast by comparing it to the number of voters who signed in to vote*, including the functions of a) counting both the number of ballots cast and the number of signatures in the precinct registers, b) comparing the number of total ballots cast and the number of signatures in the precinct register, c) investigating all discrepancies between the number of total ballots cast and signatures in the precinct register, in order to resolve those discrepancies, and d) reporting any discrepancies that remain unresolved to the canvassing authority. The benchmark for this system is the number of signatures in the precinct register.

*Currently, in most jurisdictions, voters “sign in” to vote by signing a precinct register or similar form relying on signature. However, it is conceivable that other methods for "signing in" will be developed. Precinct-level ballot accounting, regardless of the method for “signing in”, must use the actual number of voters signing in as the benchmark against which the number of ballots cast is accounted for.
3.2 Ballot Accounting Discussed

In traditional paper-based systems, such as punch cards and optiscan, there is a known, finite number of ballots at the beginning of the election. Accounting for these ballots is relatively simple and procedures are established and well-understood. As in all systems, counting used, unused, spoiled, and provisional ballots at the precinct level, and properly accounting for all ballots, is still very important to the fundamental integrity of the canvass.

Electronic voting systems are different. Where electronic ballots are used, such as DRE’s, there is no fixed number of ballots issued at the beginning of the election. Ballots are generated by machines, as needed, with the potential to issue a virtually unlimited number of ballots.\(^5\)

Much fuss can be made here about counting and auditing the casting of ballots. But elections remain baseless without the preceding step of ballot accounting, ensuring that the number of ballots cast is the same as the number of voters signing in to vote. And the potential for errors, whether intentional or unintentional, compounds rapidly where unknown and unlimited numbers of ballots are generated, in electronic voting systems such as DRE’s. So ballot accounting takes on significantly more importance to act as a primary check on the security and accuracy of the canvass.

Regardless of the system, the benchmark must be the number of voter-signatures. The number of ballots must be compared against that benchmark. If the counts of ballots and voter-signatures are different, pollworkers must investigate and attempt to resolve those discrepancies, assuming the number of voter-signatures to be correct. Even small discrepancies of one or two, have been found conceal serious problems\(^6\) so every discrepancy must be investigated. This is important to note because pollworkers are

\(^5\) Where a VVPAT is included in an electronic system, there is little if any benefit for the purposes of ballot accounting. Elections still begin with an unlimited potential to generate ballots and the eventual number issued is unknown at the beginning of the election. Most VVPAT systems are thought of as providing a paper audit trail of what the machines have done – not the essential ballot accounting that precedes tabulation.

\(^6\) At precinct 816 in Miami-Dade in November 2004, there existed a discrepancy of 2 between the number of voter signatures and the number of ballots cast. It was not investigated. Had it been investigated, officials would have found that a malfunctioning machine had its votes uploaded three times, causing 171 invalid votes to enter the canvass. The problem was not discovered until long after the canvass had been certified. This case of apparent unintentional electronic ballot-stuffing might, in a similar case, be intentionally committed.
often tired at the end of a long day and small discrepancies may not seem important to them.

As noted in our definition of “ballot accounting” above, the actual process of voters signing in may change but the essential nature of ballot accounting does not change. Many jurisdictions currently provide for voters to “sign in” by signing next to their printed name on some form or a precinct register. This has the effect of generating one ballot because that voter will then proceed to whatever voting system is employed and cast their ballot, whether that ballot is presented to them in paper form, or generated in electronic form, as is the case with DRE’s. At the end of the day, the number of cast ballots should be accounted for against the number of voters who signed in. Regardless of the technical form of “signing in”, ballot accounting remains a fundamental step in maintaining the integrity of the canvass.

It is important to recognize that the number of voters is the benchmark by which the number of ballots is measured, not the other way around. In other words, the number of ballots to be counted must be accounted for based on the number of voters. Discrepancies can be called, “ghost votes” where there are more ballots than voters, as though “ghosts” have generated additional ballots. And discrepancies can be called “lost votes” where there are fewer ballots than voters, indicating that fewer ballots have been cast than voters casting ballots, so votes have been “lost”.

Ghost votes and lost votes do not cancel each other out. Each discrepancy should be treated as one discrepancy. If precinct x discovers it has 15 ghost votes and precinct y discovers it has 15 lost votes, there are 30 discrepancies to be investigated, not zero.

Ghost votes and lost votes are not overvotes and undervotes. They are something quite different. An overvote is when the voter makes too many choices on a ballot - like selecting two candidates for President, and an undervote is when no choice is recorded by the voter for a given race or issue, like making no selection for President. Overvotes and undervotes have nothing to do with ghost votes and lost votes. The terms have developed to describe different things.

Our research also shows that pollworkers sometimes do not conduct ballot accounting even when trained to do so, or falsify counts to create a match where none exists. Without rigorous training and controls on these procedures, ballot accounting is bound to break down, fundamentally reducing the integrity of the election. On the other hand, where rigorous training and controls are put into place, it is reasonable to expect additional benefits, as pollworkers know they must do thorough and careful ballot
accounting at the end of the day. It follows that more care will be taken with the various related steps that lead to the smooth conduct of ballot accounting.

This is like knowing one has to balance one’s checkbook at the end of the month. One learns to record transactions more carefully and keep records in better order. Strengthening controls on ballot accounting has secondary benefits that also improve the integrity of the election, apart from providing a basis for each precinct’s count.

3.2.1 Get it Right the First Time – It Starts in the Precinct

Our study found that pollworkers sometimes think ballot accounting is done later, by election workers upstream, at election headquarters. It’s interesting because it illustrates how even pollworkers, many of whom are veterans to many elections, can fail to understand the importance of compiling the canvass accurately right from the beginning - the first time. Even in small jurisdictions, it is essential that the canvass be assembled with adequate controls for accuracy, security, and integrity starting at the precinct level. Later is too late.

In our report, Get It Right The First Time, MDERC observed 88 separate poll-closings - 57 at Early Voting sites and 31 on Election-day, as well as analyzing thousands of records of the 2004 Presidential election. The following are highlights of the report, which we strongly urge The Commission to read, particularly for its insight into Ballot Accounting and Early Voting.

- At 38% of sites, the public was not allowed sufficient access to witness poll-closing proceedings, undermining both security and public confidence.
- At 10% of Election-day sites, the number of voters signing in to vote was not even recorded by pollworkers, making ballot accounting impossible.
- At 77% of Election-day sites, ballot accounting was left with discrepancies unresolved. There were a total of 3,772 ballot discrepancies left unresolved.
- At Precinct 816, where virtually everything went wrong, there would have been only 2 discrepancies had pollworkers counted the registers properly. They counted them incorrectly making it appear that the difference was 111, which they did not investigate. Behind the 2 discrepancies, lay the problem that the votes of one machine had been counted into the canvass 3 times, adding 171 invalid votes, which survived into the certified canvass. This demonstrates the importance of investigating even small discrepancies and the importance of ballot accounting as a primary check on the accuracy of the canvass. It also demonstrates the importance
of ballot accounting that does get it right the first time, at the polling place, at the close of each day, before errant data is sent up to the canvass.

- Early Voting problems and error rates were similar to Election-Day with one significant exception. Because almost no guidelines or procedures were in place for the unique conditions of Early Voting, poll workers were left to improvise from Election-day procedures reflected in our first hand observations and in our review of collapsed Early Voting records.

Ballot accounting is among the best examples of why administrative practices must be included in The Guidelines. To leave out such administrative practices is to leave The Guidelines enormously incomplete and thus impotent, especially where electronic voting systems are used, such as DRE’s.

3.3 Other EAC Guidance Lacks Attention to Ballot Accounting

Additionally we would point out that proper ballot accounting is a topic that EAC has long ignored to its detriment. We have examined the July 30, 2004 Election Assistance Commission Best Practices Tool Kit. Ballot accounting is not even mentioned. No provision discusses how to document the number of voters who cast ballots at the precinct level. No provision spells out how to reconcile the number of ballots in a precinct’s DREs with the number of voters who signed in. This is unacceptable both for the VVSG and for the EAC Best Practices Tool Kit. The Commission cannot continue to ignore this topic.

3.4 Supporting Authority

Finally, we would note that the NRC recognizes the importance of ballot accounting as well. In its recent report, the NRC specifies information that must be collected for a complete audit of an election:

The number of people who voted as indicated on check in/check out lists. [P,S]

Report at 4-40. At 4-41 the Report explains that “P” stands for data critical for undertaking performance audits whereas “S” indicates information critical for security audits. This information is vital to both type of audits and its recordation should become an essential element of the VVSG.
4 Early Voting

A disturbing omission from the proposed Guidelines is Early Voting. Above we have argued that the scope of The Guidelines must include administrative practices, rather than expressly exclude them as it does in its current form. And above we have further argued that ballot accounting is among the most important of those administrative practices that is so intertwined with the hardware and software components encompassed by The Guidelines that The Guidelines are rendered impotent without widening the scope to include them.

Early Voting is a different case.

While Early Voting is not mentioned in the proposed Guidelines, essential elements of its security and integrity fall within the adopted scope of the proposed Guidelines. Additional elements of its security and integrity fall outside the current scope but within the broadened scope that we call for. This adds weight to our argument that administrative practices are inextricably joined to hardware and software and cannot be separated from them, as the current scope attempts to do.

The VVSG do not address this topic. We think that a new chapter should be developed to address the unique issues this practice raises for jurisdictions using DREs. Alternatively new sections need to be added to the following chapters in Volume 1.

1. At a minimum sections need to be added to Volume 1, Section 2 to incorporate provisions dealing with early voting.
2. Language needs to be added to 3.2.4.3.2 DRE System Vote Recording to address the issues discussed below.
3. 4.4 Audit Record Data and in particular 4.4.2 through 4.4.5 need to be redrafted to address the problems discussed below.

4.1 Early Voting is Unique from Election-day Voting

Early Voting is unique from Election-day voting, and requires separate consideration, particularly where DRE's are employed. For the purposes of our comments, we're addressing the challenges posed by Early Voting using DRE's, and more specifically to the ES&S iVotronic system used in Miami-Dade County, but The Guidelines must address the challenges Early Voting poses across numerous technologies, including the numerous DRE technologies, because constant among them is that Early Voting is
unique from Election-day voting. Many of those challenges will be common in principle to those raised here, specific to DRE’s. We urge The Commission to give careful consideration to Early Voting’s unique challenges during its review, and to write additional guidelines specifically for Early Voting.

### 4.2 How Early Voting is Unique from Election-day Voting

Early Voting typically takes place for a period of 1 to 2 weeks, ending a day or so before Election-day. In Miami-Dade, Early Voting should be thought of as one long election day, lasting for that 1 to 2 week duration, and ending that day or so before Election-day.

Machines are turned on before Early Voting starts and left on for the duration. On the last day of Early Voting at a given site, votes are harvested but not tabulated, machines are shut down, the site is broken down, and the whole operation is transported back to the elections department, where it is stored for several days, until the closing of the polls on Election-day. Electronic storage media are then unpacked, votes are tabulated, and counted into the canvass.

### 4.3 Unique Early Voting Conditions For Which Guidelines Must Be Drafted

#### 4.3.1 Incremental Openings and Closings

Chief among conditions unique to Early Voting is that machines are left on for the duration of Early Voting. This raises security issues that overlap accounting and auditing issues for which Election-day guidelines do not apply.
4.3.1.1 Incremental openings and closings of polls must be transparent, allowing the public to observe the proceedings.

4.3.1.2 Systems must provide incremental ballot accounting, including the generation of proper records for auditing and review.

4.3.1.3 Systems must generate adequate incremental security controls and audit data, including hardware and software security controls addressing incremental starting status, ending status, and security for the “down time” between incremental closings and openings.

4.3.1.4 There are sure to be other additional guidelines indicated through careful consideration of incremental openings and closings.

4.3.2 Final Day of Early Voting

There are numerous conditions unique to Early Voting that converge at the close of the final day of Early Voting. We call on the EAC to study these conditions carefully and create guidelines that fully address them. Among them are:

4.3.2.1 How is security addressed when Early Voting sites are closed and records and equipment are transported to another site to await final tabulation? This applies to both chain-of-custody and the security of the canvass.

4.3.2.2 How is transparency provided for? How is the public afforded an opportunity to observe the harvesting of votes and the counting of ballots?

4.3.3 Supporting Authority

Finally we note that the NRC recognizes our security concerns. At 4-18 the Report states that

“Early voting, an increasingly common practice that entails taking voting stations out of storage before Election Day, further complicates the achievement of security and chain-of-custody goals.”

The NRC is right and the VVSG cannot ignore these concerns. In conclusion, Volume 1, Section 6 needs to expressly address all the concerns that we have raised and amendments need to be made to other sections where appropriate.
5 Machine Ethics

Another area of concern we informally refer to as “Machine Ethics” without attempting to adopt any formal definition of the term. For this purpose, machine ethics refers to the obligation we reasonably put on machines to tell us when they malfunction or otherwise fail. The more we trust machines, the more important it is that we endow them with some of the same ethical qualities we expect from people.

5.1 Supporting Authority

The NRC Report states the following concern at 4–26:

Human interaction with computer-based machines that may be said to embody at least rudimentary intelligence poses special problems. These may occur for poll workers or technicians employed to set up the machines, make sure they are working properly, understand indications of machine failure (and curtail their use if necessary), and transfer voting data from them to other repositories. It is common that the user attributes more intelligence to a computer than it has. It is also common that a mode error is committed—namely, the user assumes that the machine is set in one mode and takes actions appropriate to that mode, when in fact it has been set to another mode and the action produces an undesirable result.

We uncovered this problem at Precinct 816, see Get It Right the First Time. One particular machine went haywire and the resulting interactions of poll workers and voting technology led to the inadvertent stuffing of the ballot box. This episode has a lot to teach the drafters of these Guidelines.

The software that runs DREs has an obligation to poll workers and election administrators to clearly document its errors and alert them to problems that have occurred. The malfunctioning machine at Precinct 816 did alert poll workers that it was malfunctioning but not with sufficient clarity to allow election officials to discover 171 invalid votes loaded into the certified canvass. This demonstrates the need for greater guidance, as the VVSG could provide. Human deference to a computer generated count is not unanticipated, but software should alert election administrators immediately and sufficiently about problems. The VVSG should recognize that software alerts are an essential component of a voting system and provide guidance for those alerts.

The EAC should also analyze these NRC recommendations:

What is the nature of the help mechanism(s) provided by the vendor? Help mechanisms can take a variety of forms, and all may be relevant to a given situation.
Vendors may provide documentation (e.g., sets of frequently asked questions) to help facilitate problem resolution, provide answers over a help line, or provide in person support at the polling place. However, consider the following:

- For complex systems, documentation cannot be both comprehensive and easy to use. Furthermore, users must generally have some familiarity with the system in order to use documentation effectively.
- Though help lines can be quite effective in resolving simple problems, it is often difficult for a help line specialist to diagnose and provide advice on a more complex problem, especially when the specialist cannot see the station with the problem and the poll worker must describe the problem in words.
- In general, in-person assistance cannot be provided as rapidly as when help lines are used (assuming that help lines can handle peak call volumes). Also, though in-person assistance is usually the most efficacious method for problem resolution, it is also the most expensive and generally the least timely (because an individual must be dispatched to the appropriate location).
- New technologies, such as chat rooms or instant messages, may provide new channels for responsive assistance.

The VVSG should address these concerns. As we mentioned in our comments on the scope of the guidelines, much will depend on how well EAC fleshes out these guidelines. Software that alerts poll workers to problems immediately and identifies problems that occur during the election will improve public confidence.
# 6 Table of VVPG References

Below is a table with reference to where some of the points we have raised should be addressed in The Guidelines. It also raises additional questions and points. Because we’ve called on the EAC to broaden its scope, this table cannot be complete as numerous of our comments are not encompassed in the current draft.

**KEY**

- **Proc** : Needs more procedure guideline
- **BalAcct** : Ballot Accounting issue
- **EV** : Early voting issue
- **MacEth** : Machine Ethics issue
- **Sec** : Security issue

<table>
<thead>
<tr>
<th>Proposed VVPG Section number</th>
<th>MDERC Comments Reference</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6.1</td>
<td>Sec</td>
<td>This section is about certifying the election systems. Many of the current systems would not pass this guideline standard. Is there a procedure for recertifying current systems? Alternatively, after a system has been certified and certification tests have been subsequently upgraded, is there a procedure to decertify systems?</td>
</tr>
<tr>
<td>1.7.1</td>
<td>Sec</td>
<td>The guidelines require that the certified voting system software be deposited in a national software repository. It is not clear how defect fixes and upgrades are to be handled both in the certification process and for software depository.</td>
</tr>
<tr>
<td>3.2.3.1</td>
<td>MacEth</td>
<td>(g) uses the term “corrected data error”. This needs to be clarified. The system should log all data errors corrected manually or corrected by the software automatically.</td>
</tr>
<tr>
<td>3.2.4.3.2(c)</td>
<td>MacEth, Sec</td>
<td>It is unclear if this section requires an entire processing path to be redundant or if it is sufficient if</td>
</tr>
<tr>
<td>Section</td>
<td>Category</td>
<td>Comment</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>3.2.4.3.2(d)</td>
<td>Security</td>
<td>“Readable by human” is a too broad a term. Any piece of machine date can be converted to ASCII and it will be readable by human but will be useless unless the structure of the data is also provided.</td>
</tr>
<tr>
<td>3.2.4.3.3 (f)</td>
<td>MacEth</td>
<td>3.2.4.3.2 (b) provides for redundant process, which allows for correction(s). Are those correction(s) also logged? There could be correction made by the software when answers from different (not redundant) data path do not match. Corrections should be logged.</td>
</tr>
<tr>
<td>3.2.6.2.2 (a)</td>
<td>BalAcct</td>
<td>What should be the result if not “completely” consistent? What happens if the two processes, defined by 3.2.4.3.2, do not match? Who resolves the inconsistency?</td>
</tr>
<tr>
<td>3.2.6.2.2 (b)</td>
<td>BalAcct</td>
<td>This does talk about any discrepancy. This needs to expand to include counting of signatures.</td>
</tr>
<tr>
<td>3.2.8</td>
<td>Security</td>
<td>This section does not include language including audit trail. Even though it does mentions “data entered manually” and “edit and update file”, it does not provide for tracking who and why someone entered data manually. This is a critical security measure.</td>
</tr>
<tr>
<td>3.4.4</td>
<td>MacEth</td>
<td>This section recognizes the importance of self-diagnostics and making poll workers aware of problems, but it does not go far enough. While the general section concedes that quantitative basis for assessing maintainability is not possible before certifying, it stops short of recommending a remedy in case a system fails the maintainability standard. There should be a process for decertifying a system even after it has been sold as a certified system when problems are encountered in the field. The Pennsylvania experience with the Unilect System in Mercer County points out the need for this.</td>
</tr>
<tr>
<td>Sect</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>4.2.2</td>
<td>The controls mentioned in this section should specify how the software should react to an unexpected event..</td>
<td></td>
</tr>
<tr>
<td>4.4.2 (a)</td>
<td>Proc</td>
<td>SW and HW diagnostic test result is not generated in the audit record of some current systems (e.g. iVotronics).</td>
</tr>
<tr>
<td>4.4.2 (b)</td>
<td>BalAcct</td>
<td>The Record should also include a machine identification number.</td>
</tr>
<tr>
<td>4.4.3 (a) (4)</td>
<td>EV</td>
<td>The audit record should also provide a notification of number of votes (both the public and the protected count) during “beginning of day” and “end of day” processing when there has been no harvesting of votes.</td>
</tr>
<tr>
<td>4.4.4</td>
<td>BalAcct</td>
<td>System should also produce a report of all exceptional events.</td>
</tr>
<tr>
<td>5.2.6 (a)</td>
<td>Sec</td>
<td>Outside providers, including vendors of the equipment, should not be given access during the period of voting.</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Sec</td>
<td>This section should also provide for the situation where the poll worker casts a ballot on behalf of the voter who walks away but only after recording the reason that the poll worker casts the vote.</td>
</tr>
</tbody>
</table>

**7 Conclusion**

Thank you for this opportunity to submit comments. We look forward to review of the Guidelines.

Very truly yours,

Dan McCrea  
Barbara Brandon  
Ajay Rai  
for the Miami–Dade Election Reform Coalition