

# *A Voter-Verified Paper Ballot – One that is Actually Counted – for Every Vote Cast in America*

This is NOT a call for all hand counted paper ballots.

This is a call for paper ballots only, to be counted either by optical scanners or by hand.

Electronic voting machines create high-tech “electronic ballots,” which voters cannot verify because these ballots are nothing more than electrical charges inside a computer. Use of these unverifiable ballots has been compromising our elections with lost votes and unsolvable controversies and must be stopped.

While HR 811, Congressman Rush Holt’s election reform bill – “Voter Confidence and Increased Accessibility Act of 2007” – requires “voter-verified paper ballots” for audits and recounts, it still allows the widespread use of voter-unverifiable electronic ballots as the ballots for the initial count. **The bill must be amended to require ONLY voter-verified paper ballots.**

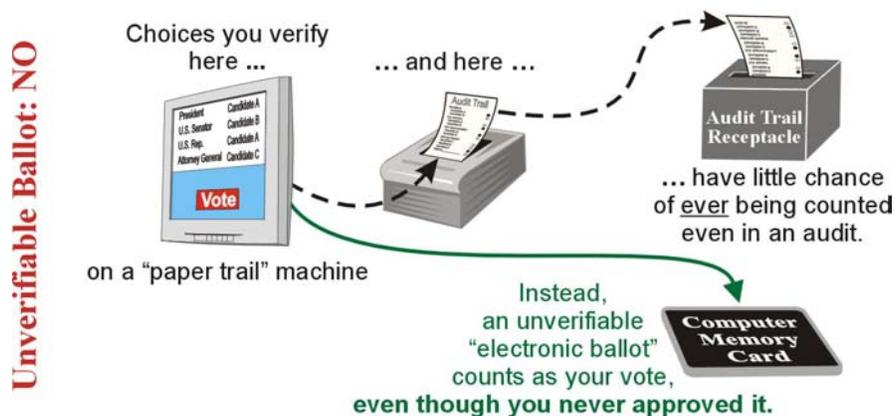
## **WITH such an Amendment, the bill requires this:**

**You mark your ballot, and it’s counted.**



## **WITHOUT such an Amendment the bill allows this:**

**You verify your ballot twice, but something else is counted.**



**A Ballot Should NOT be a Secret from the Voter Who Cast it!**

# *A Call for an Amendment to HR 811 to Ban Voter-Unverifiable "Electronic Ballots"*

## **What You Need to Know – Contents of This Packet**

### **General Information**

#### *How Paper Ballots Support Democracy and "Electronic Ballots" Undermine Democracy*

One-page explanation of why paper ballots, even when counted by optical scanners, are preferable to machines that produce unverifiable "electronic ballots," even with a "paper trail."

#### *Overview of the Types of Election Equipment*

Three pages. Brief descriptions of the major types of election equipment.

#### *Election Reform in a High-Tech World*

Two-pages. An explanation of why electronic ballots **cannot** be safeguarded the way paper ballots can, and how prohibiting the use of unverifiable, electronic ballots will solve practical election problems.

#### *The Impact of an HR 811 Amendment to Require ONLY Voter-Verified Paper Ballots*

One page. A list detailing the practical implications of such an amendment.

#### *A Voter Verified Paper Audit Trail - Not a Reliable Back Up*

One page. A report showing the unreliability of 'paper trails' in recent elections.

### **Access to People with Disabilities**

#### *Americans with Disabilities Call for Election Systems Featuring Both Accessibility and Security*

Two pages. A statement written by Mr. Noel Runyan, a blind accessibility expert, calling for voting systems that use only paper ballots. As of April 10, signatories include 40 leaders in the disabilities community and others continue to sign on.

#### *Illustration – Accessibility Doesn't Require Electronic Ballots*

One page. A pictorial explanation of the fact that accessibility for people with disabilities **can** be achieved without the use of electronic ballot systems.

### **Minority Disenfranchisement**

#### *Electronic Voting Machines: New, High-Tech Ways to Disenfranchise African-Americans*

Two pages. A report showing how electronic voting disproportionately disenfranchises African American voters.

#### *Undervote Rates Plummet in Minority Precincts When Paper Ballots are Used*

Two pages. A report showing that the undervote rate in minority precincts decreased by as much as 85% when the state switched from electronic ballot systems to paper ballots.

### **Proposed Amendment Requiring ONLY Paper Ballots**

Three pages. Proposed language, integrated into the relevant sections of HR 811.

## Voter-Verified Paper Ballots – Tabulated or Hand-Counted – Support Democracy Unverifiable “Electronic Ballots” Undermine Democracy

The foundation of democracy is each citizen’s right to vote for the candidates of their choice and have those votes counted. All voters must have access to a private ballot; they must be able to confirm that their choices are correctly reflected on the ballot – and that this ballot is actually counted.

**Voter verification of the ballot is possible only when paper ballots are used.** Voter-verified paper ballots can be counted by an automatic tabulator or by hand. When the tabulator is an optical scanner, ballots are fed into the machine just as paper is fed into a fax machine. The scanner reads the voters’ selections and tallies the votes. Used at the polling place, automatic tabulators, such as optical scanners, can provide immediate notification in the case of overvotes, allowing a voter to correct and recast their vote on the spot. Furthermore, the technology currently exists to provide such feedback in multiple languages.

Direct Record Electronic (DREs, commonly called “touch-screen”) incorporate the benefits of advanced technology. DREs can provide voting access to people with visual and physical disabilities and those with limited English proficiency. With improvements in DRE technology, this benefit has the potential to further enfranchise large portions of the voting population who would otherwise be unable to vote privately and independently.

Security concerns about DREs have nothing to do with the accessibility they offer to people who need special assistance. Security concerns relate to the inherently unverifiable “electronic ballot” that DREs create when the voter finalizes the voting. This unverifiable “electronic ballot” is nothing more than invisible, electrical charges inside the computer.

**No voter can verify electrical charges, so there is no way for voters to confirm that their votes were cast as they intended.** Instead, the unverifiable electrical charges inside the computer – which may not match the screen or “voter-verifiable paper trail” (VVPAT) – are counted for the all-important initial tally. In fact, there have been numerous documented instances where the invisible, electronic tally did not match the VVPAT tally.

Furthermore, because of the nature of computer data, “electronic ballots” can **never** be properly or transparently safeguarded like physical ballots can. Only when physical ballots are used can election officials safeguard the ballot through chain of custody procedures.

**How can we continue to use DREs for accessibility without forfeiting the ballot security essential to ensuring confidence in a basic democratic process?**

The answer is this. Where DREs are used to ensure accessibility or for other reasons, they must produce an individual, accessible “voter-verifiable paper ballot” which must be counted for all tallies, audits, and recounts. “Electronic ballots” cannot be used for any purpose, since voters cannot verify their accuracy.

When DREs are thus used as computerized paper-ballot-marking devices, they continue to provide the same accessibility for people who need special assistance, but they do not undermine democracy or disenfranchise voters as they do when they create inherently unverifiable “electronic ballots” that are then counted as if they were valid ballots.

Wherever paper ballots are automatically tabulated, the tabulators can miscount votes. So, rigorous manual audits of the machines’ accuracy are crucial. Miscounts of paper ballots can be simply resolved by hand counting all the original ballots. When DREs create unverifiable “electronic ballots,” those ballots cannot be meaningfully recounted, and the reason for miscounts or massive undercounts may never be discovered or corrected.

# Overview of Types of Election Equipment

## Optical Scanners – Paper Ballots

**Overview.** The voter marks selections on a paper ballot – either by filling in a bubble or by connecting the ends of an arrow. The ballot is fed into an optical scanner, which reads the marks on both sides of the ballot and tabulates the votes indicated by those marks.

Scanners can manage multiple precincts, and ballots can be fed into them in any direction. Scanners are pre-programmed before each election to read and tabulate the marks on the ballots for that specific election.

There are two main types of scanners.

- ◆ **Precinct scanner.** The voter feeds the completed ballot into the scanner at the precincts. The scanner reads the marks on the ballot in about one second.

If there are errors (such as too many votes for a contest), the scanner rejects the ballot by sliding it out the same slot into which it was inserted. The voter may then correct the ballot, ask for a new ballot, or ask the poll worker to override the scanner's rejection and accept the ballot anyway. Accepted ballots are automatically output into a ballot box under the scanner.

At the end of the day, poll workers print out the results tabulated by the scanner. The scanner also stores results electronically on a memory card to be read by the central computer at the elections office and/or the scanner transmits the results to the central office via modem.

Cost of one unit: \$6,000  
Voters served: up to 3,000

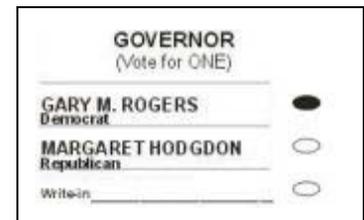
- ◆ **Central count scanner.** Ballots are collected at the precinct and carried to the central election office where this high-speed scanner resides. It is also used to scan absentee and vote-by-mail ballots. Elections office personnel feed all the ballots into the scanner, which reads the marks and tabulates the results.

The scanner separates ballots with errors or write-ins by outputting them to a special tray for personnel to examine.

Results are transferred to the central computer in the elections office, normally via cable.

Cost of one unit: \$70,000  
Voters served: Unlimited

Election Management System software is required to set up the ballot definitions and aggregate the vote totals. Maintenance and software licensing fees are charged annually. Costs vary.



Precinct scanner



Central count scanner



## Direct Record Electronic (DRE) Voting Machines – Electronic Ballots

**Overview.** The voter selects candidates from choices displayed on a computer, and when the voter presses a final button, the computer creates an electronic data record in its internal memory, and that electronic record (which the voter cannot verify) is counted as the voter’s ballot.

To begin, the poll worker provides the voter with a mechanism for accessing the correct ballot on the DRE – a programmed access card or cartridge for the voter to insert into the machine, or a number to enter on the keyboard. The voter chooses a language and then makes selections by following the instructions on the computer and taking the indicated actions, such as touching the screen and pressing buttons on the display or on a hand-held device.

Some DREs have features to assist people with disabilities, such as audio instructions for making selections and/or large buttons to press instead of touching the screen. With certain brands of DREs, the poll worker sets up the machine’s assistive features each time a voter chooses to vote with the computerized assistance. With other brands, the assistive features are available at all times.

Some DREs include a Voter-Verified Paper Audit Trail (VVPAT) printer intended to print each voter’s choices for the voter to approve before the choices are recorded electronically. However, the “electronic ballot” (which may not match the paper trail) is counted as the voter’s ballot.

Different types of DREs have different types of controls:

- ◆ **Touch screen system.** The voter touches locations on the screen to indicate their choices and touches special navigation buttons to move from one screen display to the next.

|                                      |         |
|--------------------------------------|---------|
| Cost of one unit with VVPAT printer: | \$4,000 |
| Voters served:                       | 200     |

- ◆ **Push button system.** The voter presses buttons next to the candidate names to indicate their choices. The entire ballot is provided in one display, so no navigation is necessary.

|                                      |          |
|--------------------------------------|----------|
| Cost of one unit with VVPAT printer: | \$11,000 |
| Voters served:                       | 300      |

- ◆ **Dial and button system.** The voter operates a dial and pushes buttons to make selections and navigate from one screen display to the next.

|                                      |         |
|--------------------------------------|---------|
| Cost of one unit with VVPAT printer: | \$3,500 |
| Voters served:                       | 200     |

Election Management System software and peripheral equipment are also required for these systems to set up the ballot definitions, provide voter access, and aggregate the vote totals. Maintenance and software licensing fees are charged annually. Costs vary.

Touch screen system  
(screen – approx. 15”)



Pushbutton system



Dial & button system  
(screen - approx. 15”)



## ***Ballot Marking Devices for Disability Access – Paper Ballots***

**Overview.** These devices assist voters in marking their choices on a paper ballot, which is then optically scanned or counted by hand.

Most ballot-marking devices are specifically designed to assist voters with disabilities. Some provide computerized accessibility similar to a DRE. Others offer low-tech solutions.

**Computerized non-tabulating ballot marking devices.** There are two such devices in use in the United States. Both offer language selection and high-tech computerized features for people with disabilities, comparable to the features offered by DREs, such as audio instructions for blind voters.

- ◆ The voter inserts a standard optical scan ballot into the AutoMARK and uses the buttons and touch screen to make selections. The machine prints marks in the appropriate locations on a ballot, which can then be tabulated by either a precinct scanner or a central count scanner, or by hand.

Cost of one unit (serves one precinct): \$5,700

- ◆ The voter inserts a special InkaVote ballot into the machine and makes selections, either by marking directly onto the ballot through the holes in the punch-card-like booklet, or by using the buttons and touch screens of the voter-assist component. The system includes its own precinct scanner for the special ballots.

Cost of one unit (serves one precinct): \$10,000

Election Management System software is required to set up the ballot definitions and aggregate the vote totals. Maintenance and software licensing fees are charged annually.

**Low-tech ballot marking devices.** Both non-computerized devices, the Vote-PAD and the Equalivote, provide features to assist voters with dexterity impairments as well as variations of the tactile ballot method that has been in use for many years by people who are blind or have low vision.

For both devices, the poll worker inserts a ballot into a plastic sleeve, and the voter marks the ballot through holes in the sleeve. Instructions are provided in audio, Braille, and large-print formats.

Blind voters can verify their selections through the use of a hand-held wand that vibrates when it senses a mark and is silent when it does not. The use of Braille and the vibrating wand provide independent voting for people who are both deaf and blind.

Cost of one Vote-PAD unit (serves one precinct): \$2,100

Cost of one Equalivote unit, includes booth (serves one precinct): \$3,500

No maintenance or licensing fees apply.

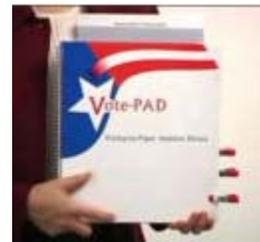
AutoMARK  
(screen - approx. 15")



InkaVote



Vote-PAD



Equalivote



## Election Reform in a High-Tech World — Safeguarding the Ballot

Everyone in a democracy understands the importance of handling ballots properly. Procedures for handling and securing paper ballots have been developed over centuries.

Electronic voting machines use high-tech “electronic ballots,” which are nothing more than electrical charges inside a computer. There are no procedures for properly handling and securing electronic ballots. The use of electronic ballots has been compromising our elections with lost votes and unsolvable controversies and must be prohibited by federal law.

Because of the nature of computer data, electronic ballots can **never** be properly safeguarded like paper ballots can. The following table lists the safeguards in place for protecting votes on paper ballots and explains why each one is impossible to implement for electronic ballots.

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| Essential Safeguard | Why It Can't Be Adapted to Electronic Ballots |
|---------------------|---|
|---------------------|---|

|   |  |
|---|--|
| Every eligible voter receives the appropriate ballot. | Software controls the ballot choices presented to each voter. Software flaws can display one or more ballots incorrectly, so election directors cannot even ensure that every eligible voter receives the right ballot.  |
| The voter can make the selections they want.          | Many voters, especially the elderly and those without computer experience, are confused or intimidated by computer voting and are unable to even select their intended candidates on the screen. This problem extends to all voters on malfunctioning machines, such as those that flip votes on the screen or fail to display all the races.  |
| The voter can review the ballot and correct errors.   | Voters cannot review electronic ballots, because no one can read the internal data inside a computer. So, if a voter's ballot is incorrect in the internal data, the voter does not have a chance to correct it. Reviewing a screen representation or a paper printout does not suffice, since the voter cannot review the internal ballot that will be counted.                             |
| The ballot is protected from tampering.               | Computer data is volatile and cannot be protected from tampering or data corruption. Electronic ballots can be altered by proximity to a magnet, power fluctuations or outages, viruses, Trojan Horses, programming “bugs,” commands from a remote computer or a keyboard, and during transmission between devices. In each case, it is impossible to detect that ballots have been altered. |
| The voters' selections are correctly tallied.         | Election directors cannot observe how vote data is processed inside a computer, so they cannot ensure that the electronic ballots have been tallied correctly. Paper ballots allow results to be meaningfully audited. Electronic ballots do not.  |

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**Electronic ballots cannot be safeguarded and must be prohibited. Federal law must require:**

- ◆ Use only paper ballots that are marked by the voter's hand or an accessible non-tabulating ballot-marking device and counted either by hand or by an optical scanner.
- ◆ Audit a statistically significant portion of all optically scanned ballots to ensure that the equipment correctly tallied the voters' selections.

*While Congressman Rush Holt's bill (“Voter Confidence and Increased Accessibility Act” HR 811) requires many safeguards for high-tech voting, an amendment must now be added to prohibit the use of electronic ballots, since safeguarding electronic ballots is impossible.*

## Election Reform in a High-Tech World — Solving Practical Problems

HR 811 requires a durable, voter-verified paper record of every vote cast. But on electronic ballot systems, the unverified electronic ballot, rather than the verified paper record, is counted.

An amendment prohibiting electronic ballots would require that the paper records be counted to create tallies rather than being set aside to be counted **only** in audits or recounts.

HR 811 requires accessible, private voting for all voters, including those with disabilities and alternate language needs.

An amendment prohibiting electronic ballots would not reduce accessibility or make it more difficult to attain. Electronic ballot systems could be converted to paper ballot markers, providing the same accessible experience for voters, while generating paper ballots that can be properly handled and secured. Many leaders in the disabilities community are now calling for accessible **and** secure paper ballot systems.

HR 811 requires voting systems to meet standards that no existing electronic ballot system currently meets; such systems are yet to be invented. However, paper ballot systems that DO meet HR 811's high standards are already in use.

An amendment prohibiting electronic ballots would prevent a fresh round of expensive technology development, rushed to market with little time for proper testing.

HR 811 requires emergency paper ballots for occasions when machines break down, but machine breakdowns are not the only way that electronic ballot systems disenfranchise voters.

An amendment prohibiting electronic ballots would also prevent the many other ways in which electronic ballot systems disenfranchise voters and bring chaos to polling places:

- ◆ **They cause long lines**, forcing many legally registered voters to leave without being able to cast a vote. This happens when too few machines are provided or the machines are delivered late, fail to start up, or break down. When voters make their selections on paper ballots, voting doesn't depend on the availability of a machine.
- ◆ **They disrupt the electoral process**, as they did in the still-contested Jennings/Buchanan Congressional election in Sarasota, Florida, as well as in many less publicized races across the country. If paper ballots had been used, there would be no more speculation about the 18,000 missing votes. The ballots would be available for inspection.
- ◆ **They change voters' selections from one candidate to another**, with no way for the voter to know if the right candidate was recorded inside the computer's memory.
- ◆ **They disenfranchise minorities**, as shown by the plunge in undervote rates of Native Americans and Hispanics in New Mexico when the state banned electronic ballots and converted to paper ballots counted with optical scan technology.
- ◆ **They make ethnic profiling possible** when voters are asked to choose between English and an alternate language, since the machines handle votes differently based on the language chosen.
- ◆ **They befuddle and intimidate ordinary citizens**, who could easily understand and effectively monitor the use of paper ballots. Electronic ballots shut out voters, poll workers, observers, and even election administrators from understanding the recording and counting of votes.

## *The Impact of an HR 811 Amendment to Ban Electronic Ballots*

No disadvantages. Lots of advantages.

### **The amendment WILL NOT:**

- ◆ increase the number of jurisdictions that have to update their equipment under HR 811,
- ◆ nor diminish HR 811's accessibility requirements for people with disabilities or language needs,
- ◆ nor increase the appropriations required for HR 811 or the costs incurred by the states,
- ◆ nor delay election results,
- ◆ nor increase the work of election directors. On the contrary, some New Mexico clerks even said that after they eliminated electronic ballots, they had the smoothest election ever.

### **The amendment WILL:**

- ◆ simplify poll worker training and enable people who aren't computer experts to work effectively at the polls. With over half a million poll workers in the field on election day, we can't require all of them to be computer experts,
- ◆ prevent ethnic profiling from being accomplished INSIDE the voting booth by machines that require a voter to choose their language,
- ◆ help prevent long lines at polling places,
- ◆ prevent another Sarasota. If something goes wrong in an election — and it will — we will be able to find out the cause of the problem,
- ◆ eliminate vote-flipping, where a voter's selection changes on the screen before their very eyes,
- ◆ allow elderly voters and others who are not computer savvy to vote in a way that makes sense to them and doesn't cause anxiety or embarrassment,
- ◆ reduce the need for vendor technicians to solve problems in the field on election day,
- ◆ simplify the testing and certification process managed by the EAC,
- ◆ reduce the operating costs of election offices across the country,
- ◆ allow implementation of HR 811 by 2008 because the necessary technology is already available, rather than not yet invented,

### **... and the most important ones ...**

- ◆ allow every voter to verify the ballot that is counted, rather than merely verifying a screen or paper representation of their ballot, which may or may not match the one that counts,
- ◆ enable voters to know that their votes were recorded as they intended,
- ◆ increase voter confidence in election results by enabling meaningful observation of ballot handling and counting,
- ◆ allow audits on questionable elections to be conducted by ordinary citizens, rather than requiring formal studies by teams of computer technology experts,
- ◆ and restore simplicity to our elections.

## Regarding Meaningful Election Reform- A Voter Verified Paper Audit Trail - Not a Reliable Back Up

As recently as October of 2004, the first voter verified paper audit trail (VVPAT) printer was qualified for use on Direct Recording Electronic (DRE) voting machines used in this country. These printers came about due to the insistence of the voters that there be a means of auditing elections. However, even in that short time, we have found that the printers often do not work as we expected them to. The printers have proven to be a placebo rather than a reliable tool. In fact the printers fail as often as the DREs they are mounted on and because of those failures they cannot be relied upon to produce ballot printouts to be used for audits.

In August 2006, Election Science Institute (ESI) released a report entitled, "DRE Analysis of May 2006 Primary; Cuyahoga County, Ohio"<sup>1</sup>. Election Science Institute is a non-partisan, non-profit election science organization, which was commissioned by Cuyahoga County to review how the county's new election system manufactured by Diebold Election Systems Incorporated (DESI) performed in the early stages of use. The findings of ESI as reported were shocking and point to why merely adding a voter verified paper audit trail (VVPAT) printer to a DRE is not a solution. The report points to the dangers of keeping DRE voting systems at all.

In order to understand the report the reader must understand the four types of vote data Diebold DRE voting machines provide:

- ◆ **VVPAT summary** data printed when the VVPAT tape is full or at the end of the day
- ◆ **VVPAT printouts** of individual, internally-stored ballots
- ◆ **DRE memory card** totals, recorded electronically and used to tally the votes
- ◆ **DRE election archive** totals, recorded electronically inside the machine

The report found the following staggering discrepancies in the vote data:

1. **Paper vs. paper.** Discrepancies occurred between the VVPAT summaries and the corresponding VVPAT ballots in **16.2% (over sixteen percent)** of the vote centers audited.
2. **Paper vs. electronic.** Discrepancies occurred between the VVPAT totals and the electronic totals in **72.5% (over seventy-two percent) of the audited vote centers.** The voter-verified paper audit trail totals didn't match the electronic totals!
3. **Electronic vs. electronic.** Discrepancies occurred between the two "redundant" electronic totals in **26% (twenty-six percent) of the audited vote centers.** The electronic totals in the machines didn't match the electronic totals on the memory cards!

Another instance of discrepancies between the electronic ballot and the voter verified paper audit trail happened in Sacramento, California during a demonstration of Sequoia's DRE with VVPAT printer. While demonstrating the machine to members of the California legislature, a Sequoia representative voted on the demonstration machine, and the votes printed out properly on the VVPAT tape. **Then the machine was switched to Spanish language and votes were cast. One eye witness noticed that when cast in Spanish, no votes for two propositions were being registered on the VVPAT while they showed on the review screen.**<sup>2</sup> **The representative tried casting votes in Spanish again, and the same error occurred the second time.** This exemplifies the inherent problem with casting votes on electronic ballot.

It is clear that VVPAT printers don't serve their purpose. Why were there problems in Cuyahoga Co.? Why didn't the voters notice that their votes were not being recorded on the VVPAT's? That's the problem. Voters tend not to look at the VVPAT tapes for a number of reasons. A new, improved VVPAT printer will be no different and if the voter doesn't verify the paper audit trail the paper audit trail may be worthless. The answer is to use only voter marked paper ballots and ban the use of electronically marked electronic ballots that unverifiable because no one can review internal data inside a computer..

<sup>1</sup> [http://www.votetrustusa.org/pdfs/ESI/esi\\_cuyahoga\\_final.pdf](http://www.votetrustusa.org/pdfs/ESI/esi_cuyahoga_final.pdf)

<sup>2</sup> <http://www.wired.com/politics/security/news/2004/08/64569>

## **Americans with Disabilities Call for Election Systems Featuring Both Accessibility and Security**

Voters with disabilities, sensory impairments, and special language needs have long been disenfranchised in large numbers as a result of lack of access to the voting process. For many of us, the passage of the Help America Vote Act of 2002 held tremendous hope and promise for secure and reliable voting, a guarantee that every voter would have access to the voting process.

Electronic ballot systems such as the direct record electronic (DRE) machines (formerly called "touch screens") now in use have quickly proven to be neither fully accessible to all voters nor secure and accurate methods of recording, tallying, and reporting votes. While the goal of private voting has been achieved by some voters, this has often been without meaningful assurance that our votes have been counted as cast. Additionally, many other voters have been disappointed and frustrated because we have not been able to vote privately and independently as we had hoped and as voting-system vendors had promised.

It is now clear that in order to guarantee reliability and security in our elections, it is necessary for the voter to be able to truly verify the accuracy of his or her ballot--the ballot that will actually be counted. The only voting systems that permit truly accessible verification of the paper ballot are ballot marking devices. These non-tabulating devices, either electronic or non-electronic, assist the voter in marking and verifying votes on paper ballots that can either be optically scanned or hand-counted. (Some DRE voting machines that have already been purchased may be adapted to be used as acceptable ballot marking devices, assuming their accessibility can be preserved or improved.)

The technology for inexpensively providing good accessibility to voting systems has been commonly available for more than a decade, and it can and should immediately be required for and applied to all modern voting systems.

This is clearly illustrated by the report "Improving Access to Voting: A report on the Technology for Accessible Voting Systems," by Noel Runyan, posted at VoterAction.org and Demos.org. Design of new systems must include, from the beginning, accommodations to allow private and independent voting by individuals with a broad range of access needs. These systems must simultaneously ensure secure elections.

We leaders and members of the disability rights community assert that neither accessibility for all voters nor the security of the vote can be sacrificed for the sake of the other. Fortunately, true accessibility and election security can both be achieved; there is no inherent incompatibility between voting system accessibility and security.

We recognize that electronic ballot systems are inappropriate for use, because these systems make it impossible for voters to verify that their votes will be counted as cast. We call upon all disability rights groups, other civil rights groups, election protection groups, and elected officials to recognize the necessity for an immediate ban on any voting system that fails to meet the twin requirements of full accessibility and election security.

*List of signatories as of 4/09/07 (affiliations are listed for identification purposes only):*

Noel Runyan, Voting access technology engineer member of Santa Clara County Voter Access Advisory Committee, and author of "Improving Access to Voting"

Roger Petersen, member, Santa Clara County Advisory Commission for Persons with Disabilities and Santa Clara County Voter Access Advisory Committee

Bernice Kandarian, President, Council of Citizens with Low Vision International

Robert Kerr, ACB Maryland

Shawn Casey O'Brien, KPFK-FM in Los Angeles, and California Secretary of State's Ad Hoc Touch Screen Task Force member

Suzanne Erb, Chairperson of the Philadelphia Mayor's Commission on Disabilities

Mike Keithley, Editor of the Blind Californian

A. J. Devies, Past President, Handicapped Adults of Volusia County (HAVOC); Charter Member, Daytona Beach Mayor's Alliance for Persons with Disabilities; Disability Consultant and Board Member, Florida Fair Elections Coalition.

Marta Russell, independent journalist and author

Judith K. Barnes, Life Member, Council of Citizens With Low Vision; Former President, Silicon Valley Council of the Blind

George Moore, Accessibility Advocate, Californians for Disability Rights.

Mike May, President, Sendero Group

David Andrews

Ruthanne Shpiner, Pushing Limits Radio 94.1 FM, Northern California ADAPT

Jean Stewart, Writer

Mike Godino, President, American Council of the Blind of New York, Systems Advocate, Suffolk Independent Living Organization

Louis Herrera

Dawn Wilcox, BSN RN, Past President Silicon Valley Council of the Blind, Board member CCCLV

Margaret Keith, VP, Monterey Co. Chapter, Californians for Disability Rights

Adrienne Lauby, Host/Producer, Pushing Limits, disability program on KPFA fm

Barry Scheur, Scheur & Associates

Tom Fowle, Rehabilitation Engineer, The Smith-Kettlewell Rehabilitation Engineering Research Center, San Francisco

Robert Lusson

Christopher Voelker

Amy Ruell

Bob Hachey, President, Bay State Council of the Blind

Susan Clarke, ENHALE, ENvironmental Health Advocacy LEague.

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Danica Nicolette O'Brien

Lida Rodriguez-Taseff, Esq.

Emily Levy, VelvetRevolution.us; former chair, City of Santa Cruz Accessibility Committee

Michael P. Gorse, Member, Bay State Council of the Blind

Christopher Gray, President, Bay Area Digital, LLC.

Sam C.S. Chen, Ph.D.

Harriotte Hurie Ranvig

Paul Parravano, Co-Director, MIT's Office of Government & Community Relations, Office of the President

Jesus Garcia, Florida Council of the Blind, Chairman of Resolutions

Paul Edwards

Ruthee Goldkorn, Owner, No Barriers Disabled Access Consulting and Advocacy Services, Executive Director, Ms. Wheelchair California Pageant

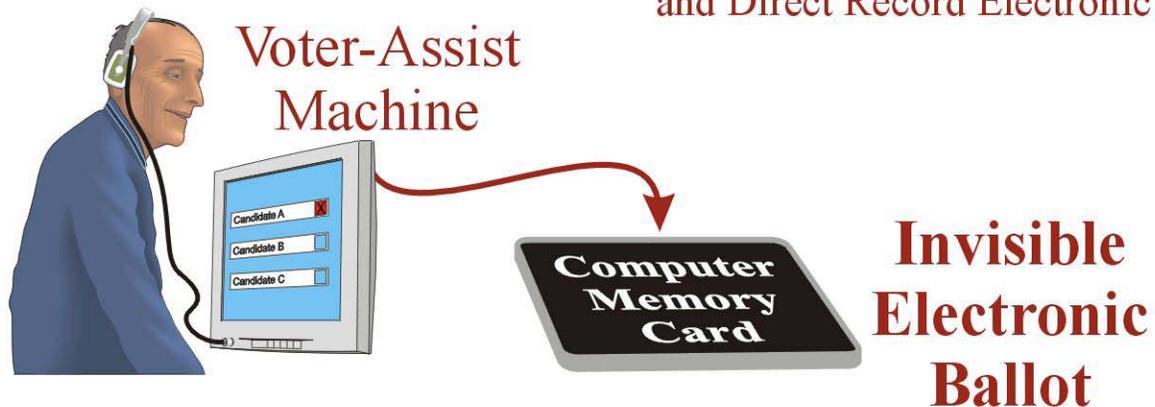
Charles Krugman, President of Fresno Stonewall Democrats and member of the Fresno County Democratic Central Committee

# The Same Voter Assistance, Different Kinds of Ballots

**Electronic Ballot: BAD**

## Electronic Voting Machine

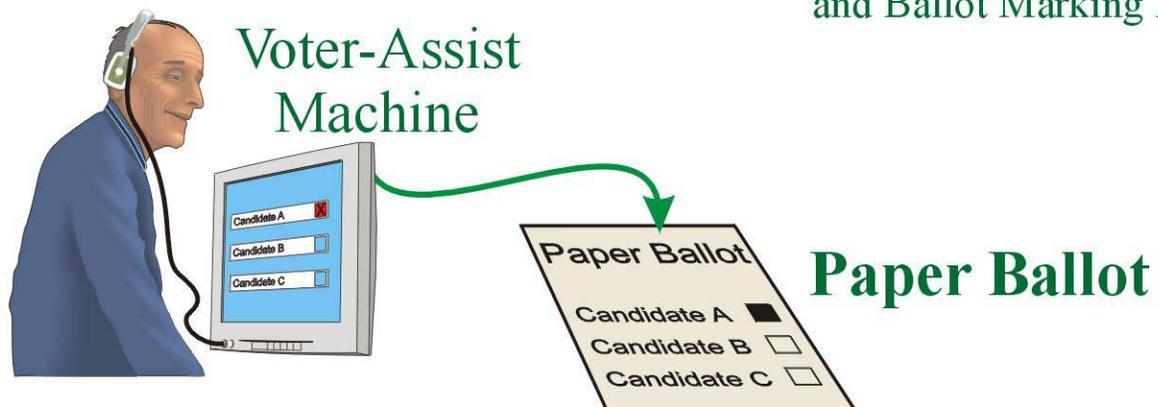
also called “Touch Screen” Voting Machine  
and Direct Record Electronic (DRE)



## Electronic Ballot Marker

also called “Touch Screen” Ballot Marker  
and Ballot Marking Device

**Touch-Screen Assist: GOOD**



**Accessible Ballot Markers  
Protect the Votes of People with Special Needs**

## Electronic Voting Machines: New, High-Tech Ways to Disenfranchise African-Americans

The rise of electronic voting has created new ways to disenfranchise African-American voters – through high-tech ethnic profiling, inequitable allocation of equipment, and discrimination against non-computer-users and the elderly.

The solution? Prohibit the use of electronic voting systems, and replace them with voter-marked paper ballots, optical scanners, and stringent audits – a combination that provides the most secure safeguards available today and in the foreseeable future.

The opportunity to ban electronic voting is before Congress now. HR 811, the “Voter Confidence and Increased Accessibility Act of 2007,” does not prohibit electronic voting but must be amended to do so, in order to protect the voting rights of African-Americans.

**“Many national organizations are pushing electronic voting machines, in spite of evidence that the machines are disenfranchising African-Americans and other minorities. Everyone must take a closer look at this – and soon.”**

*~ Velmanette Montgomery, New York State Senator*

### ***Disproportionate Numbers of African-American Votes are Lost***

Far from reducing the disenfranchisement of Florida’s African-Americans, electronic voting violates their civil rights in new ways. The 2002 debut of electronic voting machines in Miami-Dade Florida was a fiasco. The Florida ACLU studied 31 precincts with the highest numbers of ‘missing votes’ and compared the problem rate in precincts with majority African-Americans vs. majority Anglos. The Florida ACLU reported:<sup>1</sup>

*Not only are there a significant number of missing votes, but there's also an alarming racial disparity in the errors that occurred during the last election.*

*That the African American community was disproportionately affected on September 10<sup>th</sup> is particularly egregious after the well-documented disparities of November 2000.*

*There was a 15% problem rate in non-black precincts versus a 28% problem rate in majority black precincts. The probability this could have occurred by chance is infinitesimal – 0.00055. ... Poverty was not a factor that mattered, race was.*

### ***Machine Allocation Discriminates Against African-American Voters***

In the 2004 Ohio election, the inequitable distribution of electronic voting machines caused long waits in African-American precincts, and many voters had to leave without casting a ballot. Franklin County, for example, provided only one machine per 324 registered voters in predominantly African-American precincts, while in other precincts the ratio was one machine per 262 voters.<sup>2</sup> On election day, 39 of the machines destined for inner city precincts either were not delivered or were never activated, and officials had no explanation.<sup>3</sup>

A 2005 study commissioned by the State of Georgia, which uses electronic voting machines exclusively, reported that “poorer communities and communities inhabited mostly by nonwhites experienced higher levels of undercounts....”<sup>4</sup> The study also found disproportionate wait times: an average of 30 minutes reported by whites, and an average of 56 minutes reported by non-whites.<sup>5</sup>

## ***Digital Divide Shuts Out African-Americans, Decreases Confidence***

The digital divide is a reality in poor African-American communities. Inner city schools and community centers often don't have computers, so residents are often unfamiliar with and intimidated by the technology.

Before the 2004 election, Joanne Bland, African-American Director and Co-founder of the National Voting Rights Museum and Institute in Selma, Alabama, warned that the new computerized voting machines would intimidate black voters and suppress their vote in the November presidential election.

*"The computers really terrify me. The electronic voting -- the new machines -- I think it will turn off a segment in my community, particularly the elderly. We are not as technically savvy, and we are afraid of machines like that, and they (African-Americans) probably won't go [to the polls] and they probably won't ask for assistance."*<sup>6</sup>

Velmanette Montgomery, New York State Senator, agrees. In her January 2007 newsletter, this African-American leader stated:

*"[W]e believe that electronic voting machines will diminish citizen participation in the electoral process. This is especially true among minority voters, senior citizens, and those who are not computer savvy."*<sup>7</sup>

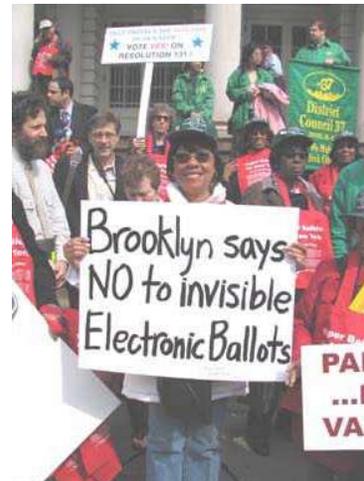
The 2005 State of Georgia study showed that, understandably, African-American voters lack confidence in the accuracy of the new voting systems. The study found that only 39% of African-American voters in Georgia had confidence in their Diebold electronic voting systems to count their votes as cast, as opposed to 76% of white voters.<sup>8</sup>

## ***The Solution: Paper Ballots, Optical Scanners, and Rigorous Audits***

Voting on paper ballots helps to prevent long lines, since voters don't have to wait for an available machine before they can mark their ballots. Scanners read each ballot in a few seconds, and if the scanner breaks down, voting can continue and ballots can be scanned later.

Only one optical scanner is required in each polling place to serve the same number of voters as ten to twelve electronic voting machines. Observers can monitor one machine more easily than ten; the process of tabulating paper ballots is observable; and meaningful audits of the paper ballots can confirm that the machines are tabulating correctly.

**With paper ballots and optical scanners, the community can understand election procedures, participate fully, and ensure honest elections.**



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<sup>1</sup> [http://www.aclufl.org/news\\_events/archive/2002/racialimpactrelease.cfm](http://www.aclufl.org/news_events/archive/2002/racialimpactrelease.cfm).

<sup>2</sup> <http://www.usenix.org/events/evt06/tech/slides/mebane.pdf>, Slide 40.

<sup>3</sup> <http://www.votersunite.org/article.asp?id=4197>

<sup>4</sup> <http://www.cviog.uga.edu/peachpoll/2005-03-10.pdf>

<sup>5</sup> <http://www.cviog.uga.edu/peachpoll/2005-03-10data.php>

<sup>6</sup> <http://www.cnsnews.com/ViewSpecialReports.asp?Page=%5CSpecialReports%5Carchive%5C200409%5CSPE20040930a.html>

<sup>7</sup> <http://www.wheresthepaper.org/VelmanetteMontgomeryPR070122.pdf>

<sup>8</sup> <http://www.cviog.uga.edu/peachpoll/2005-03-10.pdf>

# 2004 and 2006 New Mexico Canvass Data Shows Undervote Rates Plummet in Minority Precincts When Paper Ballots are Used

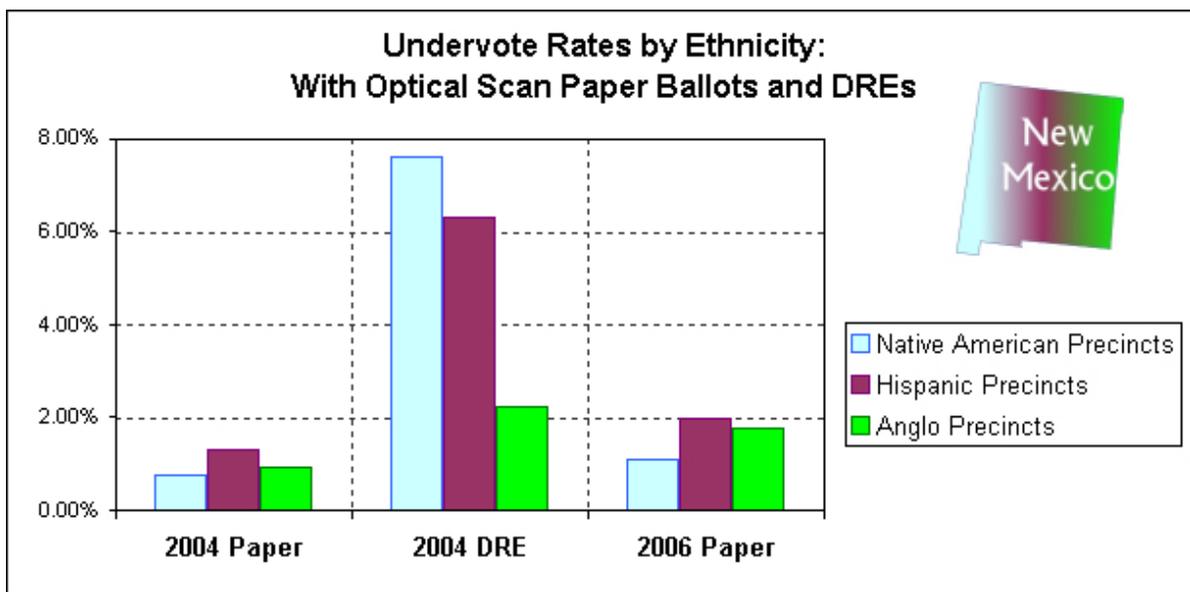
## Findings

Undervotes represent ballots on which no vote was registered for a specific contest. For example, undervotes in the presidential race occur when ballots register no vote for president.

Surveys show, and experts agree, that a 0.5% undervote rate is normal in the presidential contest. This means that one (1) out of every 200 people who casts a ballot in a presidential election chooses not to vote for president. Undervote rates higher than 0.5% in the major contest on a ballot, especially in presidential elections, suggest that votes may not have been counted, either through a mistake of the voter or a mistake in tabulation.

Analysis of New Mexico precinct vote data for the November 2004 and November 2006 elections shows that for the major contest on the ballot – president in 2004 and governor in 2006:

- ◆ Paper ballots tabulated by optical scan systems have similar undervote rates for all ethnicities.
- ◆ Electronic ballots cast on Direct Record Electronic (DRE) voting machines in Anglo precincts have a similar undervote rate to the rate for paper ballots.
- ◆ Electronic ballots cast on DREs in Native American and Hispanic precincts have significantly higher undervote rates.



## Method

November 2004 precinct vote data was obtained directly from the New Mexico Secretary of State. November 2006 precinct vote data was obtained from the Secretary of State's web site.

Equipment used in 2004 in each precinct was determined by using data from the Secretary of State's web site and confirmation calls to the clerks of each county. In 2006, all precincts used optical scan tabulators for all ballots cast.

2000 census data was obtained from the New Mexico legislature. Data sets were selected for the precincts in which 75% or more of the population was of a specific ethnicity.

The chart on the previous page shows the statewide undervote rates in both the 2004 and 2006 general elections for paper ballots and ballots cast on DREs in precincts with at least:

- ◆ 75% Hispanic population
- ◆ 75% Native American population
- ◆ 75% Anglo population

In 2004, 246,290 ballots were cast in precincts having a predominant (at least 75%) ethnicity, 98,004 on paper, 148,286 on DREs. In 2006, 180,783 ballots were cast in those same precincts. Undervote rates were as follows:

| Ethnicity       | 2004 Paper Ballots | 2004 DRE Ballots | 2006 Paper Ballots |
|-----------------|--------------------|------------------|--------------------|
| Native American | 0.74%              | 7.61%            | 1.11%              |
| Hispanic        | 1.29%              | 6.33%            | 1.99%              |
| Anglo           | 0.92%              | 2.22%            | 1.76%              |

For detailed data, see: [www.votersunite.org/info/2006NMSelectedData.xls](http://www.votersunite.org/info/2006NMSelectedData.xls).

## Acknowledgments

Our appreciation to:

**Warren Stewart** of [VoteTrustUSA](http://VoteTrustUSA), whose help in obtaining the 2004 vote data and census data used for this report was crucial and whose collaboration on the initial analysis of that data led to our report posted here:  
[www.votersunite.org/info/NewMexico2004ElectionDataReport-v2.pdf](http://www.votersunite.org/info/NewMexico2004ElectionDataReport-v2.pdf).

**Theron Horton and Bruce O'Dell** of [Election Defense Alliance](http://ElectionDefenseAlliance), who obtained the 2006 vote data, formatted it into spreadsheets for analysis, and discovered the remarkable reduction in Native American undervote rates that led to this report.

## Amendments proposed to HR 811 to prohibit electronic ballots

To amend the Voter Confidence and Increased Accessibility Act of 2007 (HR 811) to require the voter-verified permanent paper ballot, defined under such Act as the official ballot for audits and recounts, to be also defined as the official ballot for the initial count.

- ◆ In the proposed HAVA Section 301(a)(2)(A)(i):
  1. Add "or" before "a paper ballot created".
  2. Add "or marked" before "through the use of".
  3. Add "non-tabulating" before "ballot marking device or system."
  4. After "created through the use of a [non-tabulating] ballot marking device or system," delete "or a paper ballot produced by a touch screen or other electronic voting machine,"
  5. Change "permitted to verify the ballot in a paper form" to "permitted to verify the paper ballot".
  6. At the end, add "Electronic ballots, ballots cast on any medium other than paper, and ballots that are not clearly readable by the naked eye are specifically prohibited."

Changes are summarized below:

The voting system shall require the use of or produce an individual voter-verified paper ballot of the voter's vote that shall be created by or made available for inspection and verification by the voter before the voter's vote is cast and counted. For purposes of this clause, examples of such a ballot include a paper ballot marked by the voter for the purpose of being counted by hand or read by an optical scanner or other similar device, a paper ballot prepared by the voter to be mailed to an election official (whether from a domestic or overseas location), or a paper ballot created or marked through the use of a non-tabulating ballot marking device or system, ~~or a paper ballot produced by a touch screen or other electronic voting machine,~~ so long as in each case the voter is permitted to verify the paper ballot ~~in a paper form~~ in accordance with this subparagraph. Electronic ballots, ballots cast on any medium other than paper, and ballots that are not clearly readable by the naked eye are specifically prohibited.

- ◆ In the proposed HAVA Section 301(a)(2)(B):
  1. In subparagraph (i), before "preserved", add "the official ballot with respect to any election for Federal office in which the voting system is used, and shall be."
  2. In subparagraph (ii), before the period, add ", and shall be counted by hand in any recount or audit conducted with respect to any election for Federal office"
  3. In subparagraph (iii), after "correct record of the votes cast, delete "and shall be used as the official ballots for purposes of any recount or audit conducted "

Changes are summarized below:

(B) MANUAL AUDIT CAPACITY-

`(i) The permanent voter-verified paper ballot produced in accordance with subparagraph (A) shall be the official ballot with respect to any election for Federal office in which the voting system is used, and shall be preserved—

`(I) in the case of votes cast at the polling place on the date of the election, within the polling place in the manner or method in which all other paper ballots are preserved within such polling place;

`(II) in the case of votes cast at the polling place prior to the date of the election or cast by mail, in a manner which is consistent with the manner employed by the jurisdiction for preserving such ballots in general; or

`(III) in the absence of either such manner or method, in a manner which is consistent with the manner employed by the jurisdiction for preserving paper ballots in general.

`(ii) Each paper ballot produced pursuant to subparagraph (A) shall be suitable for a manual audit equivalent to that of a paper ballot voting system, and shall be counted by hand in any recount or audit conducted with respect to any election for Federal office.

`(iii) In the event of any inconsistencies or irregularities between any electronic vote tallies and the vote tallies determined by counting by hand the individual permanent paper ballots produced pursuant to subparagraph (A), and subject to subparagraph (D), the individual permanent paper ballots shall be the true and correct record of the votes cast ~~and shall be used as the official ballots for purposes of any recount or audit conducted~~ with respect to any election for Federal office in which the voting system is used.

◆ In the proposed HAVA Section 301(a)(2)(C):

After "Act and this Act", delete, "except that to the extent that such protocols permit the use of electronic mail in the delivery or submission of such ballots, paragraph (11) shall not apply with respect to the delivery or submission of the ballots."

Changes are summarized below:

`(C) SPECIAL RULE FOR VOTES CAST BY ABSENT MILITARY AND OVERSEAS VOTERS- In the case of votes cast by absent uniformed services voters and overseas voters under the Uniformed and Overseas Citizens Absentee Voting Act, the ballots cast by such voters shall serve as the permanent paper ballot under subparagraph (A) in accordance with protocols established by the Commission, in consultation with the Secretary of Defense after notice and opportunity for public comment, which preserve the privacy of the voter and are consistent with the requirements of such Act and this Act, ~~except that to the extent that such protocols permit the use of electronic mail in the delivery or submission of such ballots, paragraph (11) shall not apply with respect to the delivery or submission of the ballots.~~

- ◆ In the proposed HAVA Section 301(a)(2)(D):
  1. Change "voting machine" to "tabulating machine", and change "voting-machine-to-voting-machine" to "tabulator-by-tabulator".
  2. Insert "result of the" before "election".

Changes are summarized below:

For purposes of the previous sentence, the paper ballots associated with each ~~voting~~ tabulating machine shall be considered on a tabulator-by tabulator ~~voting-machine-by-voting-machine~~ basis, and only the sets of paper ballots deemed compromised, if any, shall be considered in the calculation of whether or not the result of the election would be changed due to the compromised paper ballots.

- ◆ In the proposed HAVA Section 301(a)(12)(B)(v), change "voting machine" to "voting equipment". Changes are summarized below:

The appropriate election official shall ensure that all ~~voting machines~~ tabulating machines and related supplies to be used in the election shall remain secured within storage facilities arranged for by the election official, and shall not be removed from such facilities until such time as they are to be delivered to the relevant polling place and secured at the polling place until used in the election.

- ◆ In Section 247(c)(8)(A) of HR 881, change the notice to: "DO NOT CAST YOUR PAPER BALLOT UNTIL YOU HAVE CONFIRMED THAT IT ACCURATELY RECORDS YOUR VOTE." Changes are summarized below:

IN GENERAL- The appropriate election official at each polling place shall cause to be placed in a prominent location in the polling place a notice containing the following statement, in boldface type, large font, and using only upper-case letters: ~~THE PAPER BALLOT REPRESENTING YOUR VOTE SHALL BE USED FOR THE OFFICIAL TALLY AND SERVE AS THE VOTE OF RECORD IN ALL RECOUNTS AND AUDITS. DO NOT LEAVE THE VOTING BOOTH~~ DO NOT CAST YOUR PAPER BALLOT UNTIL YOU HAVE CONFIRMED THAT IT ACCURATELY RECORDS YOUR VOTE'.