



RESOLVING THE VOTING MACHINE CONTROVERSY

Presentation to the
Lehigh County Commissioners

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ISSUES AND COMMENTARY



- Choices
- Cost
- Performance
- Track Record
- Reliability
- HAVA Compliance
- Responsibility



CHOICES



- Facts to Consider when choosing a voting machine system
 - Five times as many Touch Screen Direct Record Electronic (DRE) machines are required as Optical Scanners
 - Purchase Cost is a small fraction of the Total Ownership Costs
 - Track Record of previous districts using these Machines must be considered
 - Accuracy and Reliability varies considerably



TOTAL OWNERSHIP COST

(1 OF 3)



- **Initial Purchase Cost**
 - Five Touchscreens DREs are more expensive than one Optical Scanner
- **Transportation and Storage**
- **Repair Costs - Hardware Maintenance**
 - Optical Scanners require fewer repairs
- **Repair Costs – Software Maintenance**
 - Touch Screens have a track record of requiring a large number of software patches paid for by local governments
- **Emergency costs**
 - Failures of Touch Screens on voting day have required extensive involvement of vendor technicians paid for by local governments
 - Vendor Salaries, Travel, Overtime need to be taken into account

INITIAL PURCHASE COSTS ARE ONLY THE TIP OF THE ICEBERG



TOTAL OWNERSHIP COST

(2 OF 3)



- **Costs associated with added poll workers**
 - San Diego doubled the number of poll workers when switching to touch screens
 - Some districts required one poll worker for three machines
- **Machine Setup – High Front End Costs for Every Election**
 - Unique setup required for every single election
 - Every machine requires checking to ensure correct software for every election
- **Increased Security**
 - Machines need to be guarded overnight at poll

“WE HAVE FOUND TONS OF ERRORS, OMISSIONS, AND BIAS IN THEIR [THE DRE VENDORS] COST ESTIMATES”

– KEVIN BOGS, CHATHAM COUNTY, NC



TOTAL OWNERSHIP COST

(3 OF 3)



- **Poll Worker and Election Staff Training**
 - Extensive and Highly Technical
- **Cost of Replacement** – PC's become obsolete in 5 Years
 - When technology is no longer maintainable or supported by vendor
 - Optical Scanners have a lifetime of 15 years or longer
- **Recertification Costs for new software/hardware updates**
 - Illegal use of uncertified software in the past

COST SAVINGS REALIZED BY ABANDONING FEDERAL FUNDING AND ACHIEVING HAVA COMPLIANCE INDEPENDENTLY



TEN COMMON PROBLEMS



1. DRE machines lose ballots
2. DRE machines inexplicably add ballots
3. Tabulation software reaches 32,767 and counts backwards
4. Votes jump to opponent on the screen
5. DRE's provide incorrect ballots
6. Election-Specific programming miscounts votes
7. DRE's break down during the Election
8. DRE's fail to start up
9. Registration Data Transmission Fails
10. Memory Cards and Smart Card Encoders Fail

**FORTUNE MAGAZINE AWARD:
PAPERLESS VOTING AS WORST TECHNOLOGY FOR 2003**

▸ Fortune Magazine, December 2003



CLAIMS VS FACTS

(1 OF 2)



Claim

Georgia Secretary of State Cathy Cox stated “the states 26,000 elections voting machines performed without any problems”

Facts

Walker County election officials worked until after midnight following Tuesdays election to rectify problems in tallying results.

Problems became apparent with Walkers first returns about 9 pm when neighboring counties ere wrapping up their tallies. A Deibold computer technician began providing incorrect numbers to news organizations. The botched returns were fed to the media for more than two hours after the polls closed before the problem was corrected.

Voting machines have been used for six elections, three of which were for the same State House District 1 race. Problems cropped up at every election.

- Walker County Messenger, March 4, 2004



CLAIMS VS. FACTS

(2 OF 2)



Claim

“We have a high confidence level. And it's based on the fact that since 2002, when we put new equipment in place in the state of Florida that we have had no problems whatsoever, according to our 67 supervisors of elections.”

- Florida Secretary of State Glenda Hood

Fact

“iVotronics failed to count 8.2 percent of the votes”

- Broward Daily Business Review, February 3, 2003

“Election glitch missed 103,000 votes in Florida county”

- CNN, November 8, 2002

THERE ARE MANY MORE EXAMPLES OF DRE FAILURES



DUBIOUS MANAGEMENT



- We must demand that firms considered for voting devices are “Squeeky Clean”
- WTAE, Channel 4 in Pittsburgh is currently performing a background checks of voting machine companies



DUBIOUS MARKETING PRACTICES



“The *Florida Association of Counties* endorsed ES&S machines exclusively as a result of lobbying efforts by a former Florida Secretary of State. Both the lobbyist and the association received commissions from ES&S on each piece of equipment sold. The *Florida Association of Counties* will receive \$300,000 as a result of the agreement.”

- St Petersburg Times, October 6, 2002

“In 1999, a company salesman for Sequoia Voting Systems was granted immunity in a kickback scheme investigation that landed Louisiana's top elections official in prison. Sequoia electronic voting machine salesman Philip Foster got the immunity in exchange for his testimony before a grand jury. Foster himself was later indicted in the scheme, but a court tossed it out because of his immunity. He then got the charges expunged.”

- WTAE, Pittsburgh, February 17, 2006

KICKBACKS



STUDIES



- **Johns Hopkins University and Rice University**
 - “Our analysis shows that this [DRE] voting system is far below even the most minimal security standards ... We conclude that this voting system is unsuitable for use in a general election.” T. Kohno, A. Stubblefield, A.D. Rubin and D.S. Walsh, July 23, 2003.
- **Science Applications International Corporation (SAIC)**
 - “The system, as implemented in policy, procedure and technology is at high risk of compromise.” September 23, 2003
- **Commentary by William Arbaugh, University of Maryland**
 - “I was really surprised at the totality of problems that we found. Just about everywhere we looked we found them.”



HAVA REQUIREMENTS



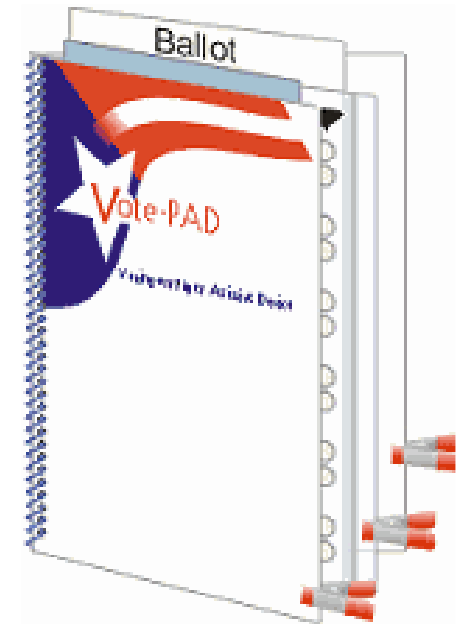
- Provide voters with information on the effect of over-voting, how to correct ballots and how to request a replacement ballot.
- Have voting systems that produce a permanent paper record with manual audit capacity.
- At least one private disabled-accessible device must be present in every precinct - HAVA does not require the use of DREs
- Comply with the Federal Elections Commission's standards for voting equipment error rates.
- Define uniform and nondiscriminatory standards for what constitutes a vote.



HAVA CHOICES



- Precinct Count Optical Scanner
 - Ballot is electronically checked for completeness at precinct
 - “In conclusion, our analysis points to fill-in the dot, or precinct count optical mark reader as the clear technological option of choice for cost-benefit grounds,” George Washington University, Institute for Communications Policy Studies, July 2001.
- Oregon-like “Vote By Mail” System
- The Vote-PAD
 - Non-Computerized Ballot Marking Device
 - Made of paper, plastic and NO SOFTWARE AT ALL, the device works with a paper ballot and costs about one-tenth of DREs
 - Allows voters with disabilities of all sorts to be able to cast their own vote, in secret





RESPONSIBILITY



We owe it to our fellow citizens, our forefathers and ourselves to get this right



Benjamin Franklin

**ETERNAL VIGILANCE IS
THE PRICE OF FREEDOM**
- Thomas Jefferson



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