Free and Fair Elections

Twenty-first Century Challenges

At the December TACIR meeting, Commissioners voted to study elections and voting methods in Tennessee

Goals of the comprehensive study:
- Increasing public confidence in election methods and results
  - How to safeguard voting machines
  - Verifying voter eligibility
  - What other states are doing
- Controlling the cost of elections
- Ensuring access for all eligible voters to the polls

The End of Punch Card Voting

The 2000 Presidential race in Florida drew attention to the problems with inaccurate and antiquated punch card voting machines.

Nationwide election reform was set into motion.

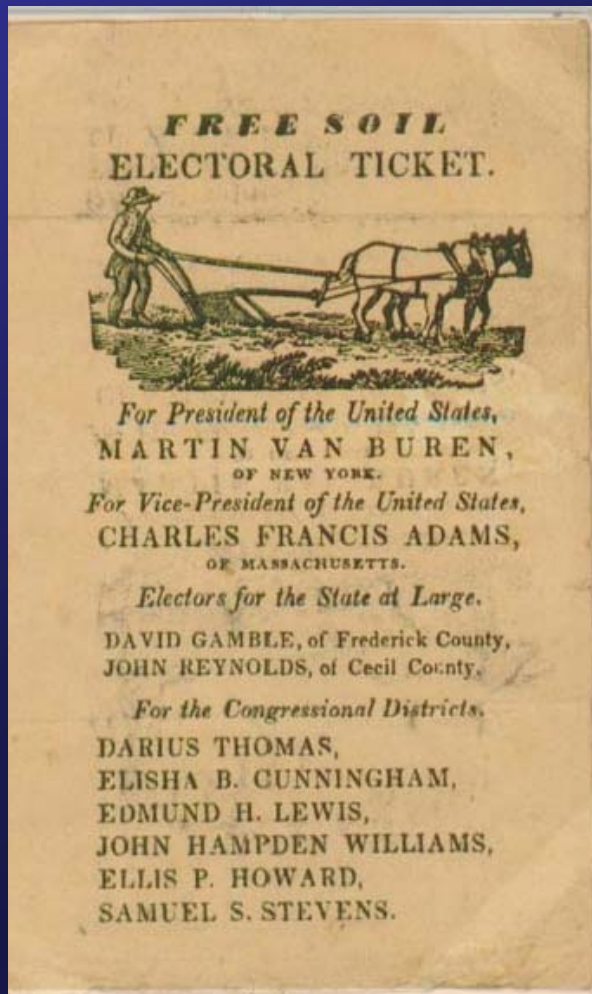# Solutions Focused on Electronic Voting Machines

What are Electronic Voting Machines?

- Optical Scan Machines use a paper ballot, and the voter fills in a circle next to his choice; an electronic reader later counts the votes

- Direct Recording Electronic Machines (DRE's) count the vote when it is cast. They do not have a paper record of the vote unless a printer is installed for that purpose. DRE's come in two types:

  – Touch Screen DRE's require the voter to make choices by touching the screen

  – Push Button DRE's require the voter to press a button next to her choice, or to move a cursor to her choice and then press a button to accept that choice

How Tennesseans Vote

■ (yellow) Optical Scan Machines Plus Touch Screen DRE's for Handicapped and Disabled Access

■ (red) Touch Screen DRE's

■ (blue) Push Button DRE's

Source: Tennessee Division of Elections

Voting Machine Types by County

Voting Machine Manufacturer and Type	Counties
Microvote Infinity Machine	**45 Counties**: Bedford, Bradley, Cannon, Carter, Clay, Cocke, Crockett, Cumberland, Dekalb, Dyer, Fayette, Fentress, Franklin, Gibson, Gile, Grundy, Hamblen, Henry, Jackson, Jefferson, Johnson, Lauderdale, Lawrence, Macon, Marshall, Meigs, Montgomery, Overton, Perry, Putnam, Robertson, Rutherford, Scott, Sequatchie, Smith, Stewart, Sumner, Tipton, Trousdale, Unicoi, Union, Van Buren, Warren, Washington, Wayne
Hart Eslate Machine	**31 Counties**: Anderson, Benton, Bledsoe, Blount, Campbell, Carroll, Cheatham, Chester, Claiborne, Dickson, Grainger, Hancock, Hardeman, Haywood, Henderson, Hickman, Houston, Humphreys, Knox, Lewis, Loudon, Madison, Marion, McMinn, Monroe, Morgan, Polk, Rhea, Roane, Sullivan, White
Election Systems and Software (ESS) Ivotronic Machine	**17 Counties**: Coffee, Davidson, Decatur, Greene, Hardin, Hawkins, Lake, Lincoln, Maury, McNairy, Moore, Obion, Pickett, Sevier, Weakley, Williamson, Wilson
Diebold Accuvote Machine	**2 Counties**: Hamilton, Shelby

Concerns with the Voting Process are Not New

FREE SOIL ELECTORAL TICKET.

For President of the United States,
MARTIN VAN BUREN,
OF NEW YORK.

For Vice-President of the United States,
CHARLES FRANCIS ADAMS,
OF MASSACHUSETTS.

Electors for the State at Large.

DAVID GAMBLE, of Frederick County,
JOHN REYNOLDS, of Cecil County.

For the Congressional Districts.

DARIUS THOMAS,
ELISHA B. CUNNINGHAM,
EDMUND H. LEWIS,
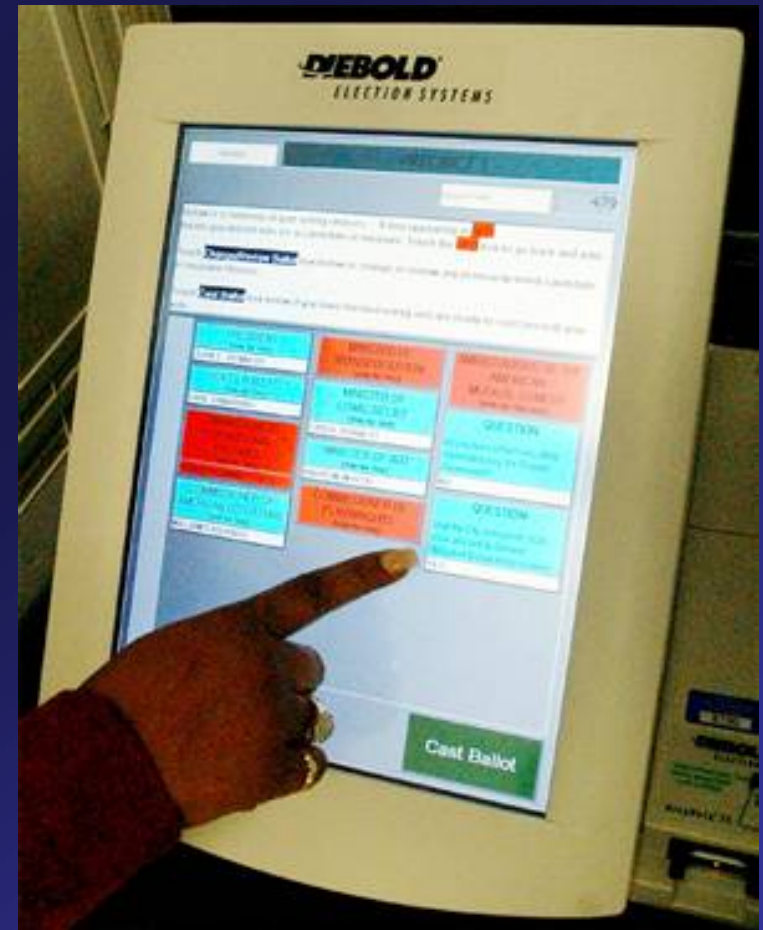JOHN HAMPDEN WILLIAMS,
ELLIS P. HOWARD,
SAMUEL S. STEVENS.

- Early voting was oral and lacked privacy
- The first paper ballots were printed by political parties
- In high population areas, lever voting machines saved money, but their accuracy could not be verified
- Punch cards left a paper record, but problems were reported with them as early as 1968

Electronic Voting Brings a New Set of Problems

In 2006, computer voting problems were reported in 26 states, including complaints of:

- Lost votes
- Votes credited to the wrong candidate
- Voting machine failure
- Paper jams
- Misprinted barcodes on absentee ballots
- Blank or poorly calibrated touch screens
- Missing or stolen access cards
- Various programming problems

Studies show that voting machines are vulnerable to fraud and error

"There is evidence that some of these concerns have been realized and have caused problems with recent elections, resulting in the loss and miscount of votes."

The Government Accountability Office confirmed the conclusions of many other studies of electronic voting machines in its 2005 report.

Concerns with DRE Systems

- Voters cannot verify that their votes are recorded correctly
- The votes cannot be counted in a publicly viewable fashion
- Meaningful recounts are impossible
- Programming code is proprietary and unavailable for public review
- Voting machines testing methods are proprietary and results are unavailable for public review
- Gross design and programming errors have been found in some brands of voting machines

How Results Can Be Compromised

- Human Error
- Machine Malfunction
- Fraud

Human Error

- Poor programming
- Inadequate training of election officials
- Voter unfamiliarity with the technology

Machine Malfunction

- Faulty computer chips
- Touch screen misalignment
- Jammed printers
- General machine breakdown

Fraud

Voting machine fraud has not been proved, but studies have shown that machines are vulnerable to:

- Hacking vote tallies
- Malicious programs that can remain undetectable
- Manipulation of touch screen alignment

An Example of Voting Machine Problems - Florida's 13th Congressional District – 2006

- Sarasota County had a 13% undervote (representing 18,000 votes) compared to 2% in the rest of the district
- Election was decided by 368 votes
- Post-election machine tests failed- human error was blamed
- Request to view proprietary software denied by courts
- Official verdict: Faulty ballot design

Tennessee's 2006 Voting Troubles

- Special election results in Senate District 29 overturned
- Memory chips failed in Knox County
- Long lines at Cora Howe Elementary School in Nashville
- Power failure in several Memphis precincts- backup battery power effective
- Voting machine failure in Hawkins County
- Several ballot access cards missing in Memphis
- Possible early voting fraud in Memphis

Balancing Competing Interests in Running Elections

- Access vs. Security
- Privacy vs. Verifiability
- Expense vs. Accuracy

Access   vs.   Security

In Tennessee:
- No durational residency requirement
- 30-day registration requirement
- Multiple registration locations
- Permanent absentee ballot status for the permanently disabled
- Provisional ballots
- Early voting

Ideas from other states:
- Same day registration
- No excuse absentee ballots
- Vote by mail
- No disenfranchisement (or automatic reenfranchisement) of convicted felons

In Tennessee
- Vote in person after mail-in registration
- Statewide voter registration databases
- Biennial address confirmation
- Regular purging of deceased voters and convicted felons
- ID requirements at polls
- Signature confirmation
- Provisions for challenging voter eligibility

Ideas from other states:
- Photo ID at polls (several states)
- Proof of citizenship at registration (Arizona)

Privacy   vs.   Verifiability

- Maintaining a secret ballot
- Allowing disabled voters to vote without aid

- Allowing voters to verify that their votes are counted correctly
- Ensuring disabled voters make their intentions understood

Expense   vs.   Accuracy

- Combined elections save money

- Paper trails create printing, counting and storage costs

- Recounts can create enormous personnel costs

- Long ballots confuse voters and slow the process

- Paper ballots can be audited and recounted

- Recounts aid public confidence

TACIR Study

The TACIR report will examine

- Ways to increase access while maintaining security
- Ways to allow a voter to verify that their vote is counted accurately while maintaining privacy
- Ways to control the cost of elections while maintaining accuracy

Short movies demonstrating the use of each type of voting machine can be found at the following websites:

Microvote Infinity:

http://www.state.tn.us/sos/election/voting_systems/votetraining.wmv

Hart Eslate:

http://www.state.tn.us/sos/election/voting_systems/hart.htm#

ESS Ivotronic:

http://pointers.audiovideoweb.com/stcasx/ca25win25217/ESS_IVO.wmv/play.asx

Diebold Accuvote (touchscreen then optical scan):

http://www.diebold.com/dieboldes/demos_tsx.asp

http://www.diebold.com/dieboldes/demos_os.asp

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