

# The Privatization of United States Elections

June 18, 2005. Speech to the Washington Federation of Democratic Women:

Voting machine manufacturers are deeply embedded in our election processes – so deeply that it's not an exaggeration to say that our elections have become almost completely privatized. Some counties still hand count paper ballots, but they are quickly changing to more "advanced" methods. Oklahoma has kicked the vendors out of the state, but it's the only state that has such good sense.

I began my journey into the darkness of our election system when, after having tested software and written technical documentation for 20 years, I found out that people were using paperless computers to record and count votes. I thought, "I have to warn them that this is a really bad idea." Now two years later, I've found out more than I ever wanted to know about what a really bad idea it is. The handout I brought showing a quick look at SOME of the electronic malfunctions in the 2004 election doesn't even penetrate the surface of the problems.

Let me give you a brief primer on the background, and then rather than go deeply into the malfunctions of these machines or the theoretical reasons why it's a no-brainer that we shouldn't mix elections and computers, I'll discuss the privatization of elections in the United States.

## *A Little Background – The Vendor Bonanza*

The Florida fiasco in the 2000 election led directly to the enactment of the federal Help America Vote Act in October 2002. A major purpose of HAVA was to provide money for counties that wanted to "upgrade" their voting systems. The total amount approved was \$3.9 billion and much of that was for the states to improve their election systems. [average of \$80Mil per state]

In addition to providing funding for improvements, HAVA mandated some requirements for all voting systems used in federal elections. One of those – the most widely publicized – is the requirement that all jurisdictions provide a method by which disabled individuals can vote unassisted. The wording – influenced by vendor lobbyists – is unfortunate. HAVA requires "at least one direct recording electronic voting system or other voting system equipped for individuals with disabilities at each polling place."

How many know what a direct recording electronic voting machine (DRE) is? It's a computer, and some computers have capabilities that allow disabled people to use them. "Direct Recording Electronic" means that the votes are recorded on electronic media directly from choices that voters make on the screen, without the use of a paper ballot. The "direct recording" part is unrelated to the features that allow disabled people to use them, but that's a technicality that seems to have been lost as vendors have been out selling their very expensive DREs to county officials who have never read HAVA and are unfamiliar with computer technology.

As a result of the misinformation they and others have been propagating, we see counties across the United States rushing, like lemmings, to purchase DREs for all their citizens to vote on – when, in fact, HAVA does NOT require any such thing. HAVA simply requires that disabled people be able to vote independently; it doesn't require the use of computers.

Essentially, HAVA opened the purse strings, and the vendors are doing what they do – attempting to get the biggest piece they can get of the great big HAVA pie. Meanwhile, they are taking over every aspect of our elections.

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## *Writing Federal Standards*

For example, the voting machine manufacturers help develop the standards their equipment must meet. Government officials consult them as experts, standards committees adjust their standards to accommodate the manufacturers' existing equipment, and the manufacturers are explicitly left on their own to fill in the details through their own "creativity."

This is tantamount to the government allowing the baby crib industry to write their own safety standards for cribs. If that had been done, poorly designed cribs would still be causing the deaths of thousands of babies every year.

## **At the federal level:**

Here's a portion of the transcript from the April 20-21, 2005 meeting of the government officials setting up the standards for our voting systems. This particular discussion is about the standards for voter-verifiable paper audit trail printers.<sup>1</sup>

PAUL CRAFT, MANAGER OF THE FLORIDA DIVISION OF ELECTIONS, VOTING SYSTEM SECTIONS: And, John, basically, I mean, this is overall very good work product. I think y'all have done good research. ... One thing we could do, I think we have engineers from the companies in the audience. We could perhaps on the break ..., see if the -- the two companies that are particularly affected, see this as being something they can meet or that they already do meet.

MR. CHAIRMAN: For the break, I'll make a statement and then maybe we can ponder this. I don't think we are here to basically approve the operations of currently available equipment. If that's all we're here for, then we're wasting everybody's time. We are here to set minimum requirements to established trust and confidence in voting systems. If there are equipment out there that may have been purchased by certain states that don't meet those criteria, I don't think it is our function to basically approve their continuing operations.

<<back from lunch>>

PAUL CRAFT: Okay. In consultation with the engineers here from ES&S, Sequoia Pacific, and Diebold, all three gentlemen agree that number one, the goals for functionality and security and reliability that we've put into this standard are quite desirable. They all agree that the functions that we're calling for are doable. They are very concerned, though, that the functions that we're calling for with the design limitations that we're putting on the solutions are not doable. I think that needs to be addressed very short order. I don't know if it's a product that we can do as a committee. .... I think we need to concentrate on the function requirements, the security requirements that we want and then leave design elements open to the creativity of the people who have to meet those requirements.

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<sup>1</sup> Minutes of the National Institute Of Standards And Technology TGDC - Meeting, Pages 374-377. April 20-21, 2005. [http://vote.nist.gov/tgdc\\_xscript20050420.rtf](http://vote.nist.gov/tgdc_xscript20050420.rtf). John Gideon tracked down the name of the "Male" speaker and discovered that he is Paul Craft, Manager of the Florida Department of State, Division of Elections, Voting Systems Section.

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### *Developing the Software and Hardware*

Let's take a look at how that creativity is working out.

Voting machine manufacturers are completely protected by "trade secret" laws. Even though their work product is used to administer elections, the process by which they develop the equipment, the design of the equipment, the source code of the software, and even much of the documentation for the systems is hidden from the public. Courts have upheld this "trade secret" policy, and the vendors use it broadly to hide their information from the public. We have also seen election officials use it as an excuse to refuse the public access to such items as the System Administrator's Guide to the Sequoia e-voting machines and audit logs produced by the ES&S touch screen machines.

The requirement for secrecy is even written into their contracts with our government officials.

However, we have learned something about the source code through the fact that both Diebold and Sequoia left their "trade secret" source code on open FTP sites, where it was discovered by voting integrity activists. We have learned something about the design of the equipment through studies that have been called for by government officials and then made public.

And we have also learned something about the design by paying attention to news articles and first-hand information from activists. For example:

- ◆ A news article revealed that you can set up a **default candidate**<sup>2</sup> on the Hart Intercivic e-voting system, which is used in Yakima County, Washington.
- ◆ Another news article informs us that the Sequoia touch screen (used in Snohomish County) can remain in test mode during an election.<sup>3</sup> If that happens, the votes won't count.
- ◆ Paul Lehto discovered that Sequoia provides a button that places the machine into manual mode, in which a voter can cast an unlimited number of votes.
- ◆ Now we find out from the investigative work of Bev Harris that the memory cards which we thought just stored votes can also hold programs that the optical scanners execute as they count the votes, and there's nothing to stop someone from putting the program of their choice on one of these cards.<sup>4</sup>

Clearly, the design of the systems is tragically poor quality and should not be left to the "creativity" of the manufacturers. They're doing a very bad job.

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<sup>2</sup> [http://www.votersunite.org/info/content/mess-up\\_122704.asp](http://www.votersunite.org/info/content/mess-up_122704.asp)

<sup>3</sup> [http://www.votersunite.org/info/content/mess-up\\_092604.asp](http://www.votersunite.org/info/content/mess-up_092604.asp)

<sup>4</sup> <http://www.bbvforums.org/cgi-bin/forums/board-auth.cgi?file=/1954/5921.html>

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### *Obtaining Federal Qualification*

The vendors also control the process by which their equipment is tested against the federal standards.

When a vendor wants to qualify a new system, they enter into a confidential contract with an ITA. The vendor pays for the testing, and the ITA "independently" approves or disapproves it. Since the contract is confidential, neither election officials nor the public are allowed to know anything about the testing process or details of the results. Either the system receives its "NASED" number or it doesn't. That's the extent of the information available to us.

### *Obtaining State Certification*

The vendors also control the process of getting certified for use in a state. Nearly all states wait for the vendor to make the initial move and apply for state certification. This gives the vendors an enormous amount of control over the type of voting equipment each state will use.

For example, the activists in New York have worked very hard to get optical scanners on the radar of their legislators and election officials, but the vendors have decided that New York is a DRE state.<sup>5</sup> So even though the state legislature left it up to the counties to decide what equipment they would buy to replace the lever voting machines, if the vendors don't submit any optical scanners for state certification, the only option for the counties will be the electronic voting machines.

### *Providing Information to State and County Officials*

Vendors attend all the conferences of the National Association of Secretaries of State (NASS). In fact, most of them are "corporate affiliates" of that organization, paying up to \$20,000 annual dues for the privilege.<sup>6</sup>

The Election Center, which bills itself as a non-partisan, non-profit organization holds training session annually for state and county election officials. Voting machine vendors not only attend the conferences, but they also sponsor them. Last year Sequoia provided a dinner cruise down the Potomac for these officials. The Election Center is run by a man who has admitted to taking large donations from Diebold, Sequoia, and ES&S. The conference this year is in Hollywood, and several events are sponsored by these three same companies.<sup>7</sup> **Dean Logan will be speaking on "Challenged Elections and Recounts." And the Election Center has been hired by King County Council to audit the county's election.**

Vendor lobbyists are seen as a source of information by legislators and election officials alike. Election officials turn to them for technical information before they purchase, and they look to them for answers afterward. I have been working on an analysis of the data in the May 2005

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<sup>5</sup> **Does ES&S Really Want to Sell the AutoMARK Machines?** May 25, 2005.

[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=74&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=74&Itemid=30)

<sup>6</sup> **Corporate Control of the Election Process.** by John Gideon. June 15, 2005.

[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=86&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=86&Itemid=30)

<sup>7</sup> <http://www.electioncenter.org/>

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primary in San Antonio. I have a ballot image file with a column of information I couldn't identify. I called the Bexar County election office to ask what it was and talked to the man who had collected the data to send to me. He told me he didn't know what the information was. I would have to check with ES&S. This is not the first time I've been told that by an election official. They don't know their own systems, and they rely on the vendors for technical support – even when it comes to identifying the data in their own reports.

### *Ballot Programming*

Ballot programming is unique for each election. It involves defining all the races and candidates for each precinct. It tells the voting machine software how to interpret a voter's touches on a screen or marks on an optical scan ballot, how to record those selections as votes, and how to combine them into the final tally.

ES&S does the ballot programming for 1200 counties in the United States. That's over a third of the counties. Many counties in New Mexico rely on their election equipment supplier to program their ballots. Some of these same counties have the vendors create the test ballots that they run through the system before an election to make sure the votes will be counted correctly.

When you buy an electronic voting machine, it comes with an automated testing program. Rather than having to enter a set of test ballots tediously by hand on the touch screen, you can just run the vendor's test program. It automatically generates test ballots, enters them into the system, records them, and prints the final results.

In other words, not only do these vendors create the secret software that provides the foundation for the system's operation, they also do the election specific set up that determines how the markings are translated into votes, and then they supply all the materials for testing that the programming is correct.

The vendors make plenty of ballot programming errors, and when they are discovered, they use the "oops" defense. For example:

**November 2000. Bernalillo County, New Mexico.** A flawed ballot definition file for the presidential election caused 67,000 absentee and early-voting ballots to be counted incorrectly. The ballot programmer had neglected to link the candidates' names to their respective parties.<sup>8</sup>

**November 2002. Scurry County, Texas.** A landslide victory for two commissioner candidates caused poll workers to question the results. The chip in the ES&S 650 contained an incorrect ballot program. ES&S sent a new chip, and the county officials also counted the votes by hand. The opposing candidates actually won by large margins.<sup>9</sup>

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<sup>8</sup> "Human error is cause of N.M. election glitch." Government Computer News; November 20, 2000; Vol. 19 No. 33  
[http://www.gcn.com/vol19\\_no33/news/3307-1.html](http://www.gcn.com/vol19_no33/news/3307-1.html)

<sup>9</sup> 06/03/04. Conversation with Scurry County Elections Director, who told me it was an ES&S 650. She said it was the chip with the ballot programming on it, that they had to get a new one from ES&S. Original reference was from *Black Box Voting*, Chapter 2. Houston Chronicle, 8 November 2002; "Ballot glitches reverse two election results"

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**September 2002. Union County, Florida.** A programming error caused ES&S Model 100 machines to read 2,642 Democratic and Republican votes as entirely Republican in the September 2002 election. The ballot program in the memory packs read the ballots incorrectly. The vendor, ES&S, accepted responsibility for the programming error and paid for a hand recount.<sup>10</sup>

This next one is stunning to me because it appears to be a deliberate "mistake" on the part of the ES&S technician, yet he got away with the "oops" defense. Note also that this is one of the few ballot programming errors detected on touch screens, because you need paper ballots to confirm the error. This election, fortunately, was using both.

**April 2002. Miami-Dade County, Florida.**<sup>11</sup> The software used to combine absentee votes with electronic ballots changed the order of the candidates' names as it computed the results. The initial tally showed wins for two City Council candidates who actually lost the election. Election workers who had been watching the results fed into the computer noticed the problem.

Here's what had happened. Prior to the tabulation, an ES&S technician had opened the ballot program on the memory cards to change a header. At the same time, he bumped the first candidate to the last position in the ballot definition file.

"When the technician saved the edit, a prompt most likely popped up on the monitor asking him if he was sure he wanted to change the order of the names. The technician ignored the prompt and confirmed the change."

## *Installing Systems, Setting them Up, Training the Personnel, Providing Technical Support*

Most election officials don't just depend on vendors for technical support, they **ARE DEPENDENT ON** those vendors to install the systems, configure them, train the staff and poll workers, explain technical details the officials don't understand, and troubleshoot every time a problem occurs – and that's very often.

As a result, we see vendors installing uncertified software without the officials' knowledge – as they did in Snohomish County, 17 counties in California, and in other states. We see vendors retrieving data in their personal offices, which are next door to the election director in the county government building. We see vendors sending malfunctioning memory cards to Canada to retrieve the results.

The following quotes from newspapers tell the story. Unfortunately, it was very, very easy to collect this set of quotes. I could have found similar quotes in nearly any news article about malfunctioning election equipment.

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<sup>10</sup> 6/2/04 Conversation with Barbara Montpetit, Supervisor of Elections. Original reference was from *Black Box Voting*, Chapter 2. "Sometimes the old ways are best." The Bradenton Herald, 17 September 2002.

<sup>11</sup> **Technician's Error, Not Machines, To Blame In Dade Election Mix-Up.** The Miami Herald. April 4, 2002. By Oscar Corral. [Read more at [http://www.votersunite.org/info/content/mess-up\\_062804.aspx](http://www.votersunite.org/info/content/mess-up_062804.aspx) purchase through Miami Herald online archives]

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"We found out all the votes were not counted," she said.

Smith said she contacted Sequoia Voting Systems Inc., the Oakland, Calif.-based hardware and software firm that provided the touch-screen system, and the company provided assistance in finding and correcting the problem.<sup>12</sup>

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"They have a bunch of technicians in the tabulation room, and they are pulling out wires and reattaching them, and the computer screens are all frozen. You can tell that something is happening," Peña said.

... Borofsky said the delay occurred after it was discovered the tabulation computers hadn't been properly programmed with updated data in order to count the mail-in paper ballots.<sup>13</sup>

Notice that this "pulling out wires" occurred in the middle of counting the ballots.

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Both Jackson and Sadler, the Johnson and Marion county clerks, were irked by the way ES&S technicians surreptitiously installed certified software to replace uncertified versions on March 29 and 30. Both clerks said they were told the ES&S technicians were working on the machines for an entirely different purpose. Both clerks feel they were lied to.<sup>14</sup>

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ES&S, the company in charge of printing ballots for the county did not send them in time and delayed early voting by at least a week, according to Judy Armstrong, the county's election coordinator.<sup>15</sup>

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More than 6,900 of about 26,000 ballots - mostly early votes - did not record votes for president with 10 of 52 precincts reporting. Similar problems were noted on all other races.

The Texas Secretary of State's office and Elections Systems & Software, the creator of the county's vote -counting system, will work with county officials to resolve the problem.<sup>16</sup>

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<sup>12</sup> [http://www.votersunite.org/info/content/mess-up\\_121104.asp](http://www.votersunite.org/info/content/mess-up_121104.asp)

<sup>13</sup> [http://www.votersunite.org/info/content/mess-up\\_080704.asp](http://www.votersunite.org/info/content/mess-up_080704.asp)

<sup>14</sup> [http://www.votersunite.org/info/content/mess-up\\_070704.asp](http://www.votersunite.org/info/content/mess-up_070704.asp)

<sup>15</sup> **Early voting runs into delays in 4 counties; suit filed in 1.** Arkansas Democrat-Gazette. May 7, 2004. By Stephen Deere.

<sup>16</sup> <http://www.votersunite.org/info/content/newmessup-19.asp>

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The touch-screen machine locked up during voting Nov. 2 and was taken out of service. Election night, despite coaxing from technicians, the machine would not divulge results from 63 voters.

Officials gathered around again six days later, on Monday, but the machine wouldn't budge despite the best attempts by experts from the manufacturer, Diebold Election Systems.

They met again the following day. County elections officials reported they had sent the machine's memory card to Diebold laboratories in Canada so technicians there could attempt to extract the numbers. They reported that attempts were successful and that the results were finally in.<sup>17</sup>

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Following November's election [2003] in Santa Clara County, Sequoia sent over a group of blue-coated technicians to make adjustments to voting machines that experienced battery problems. For three weeks, the workers, employed by a Sequoia subcontractor, took apart the machines, removing their circuit boards and making adjustments.<sup>18</sup>

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Two recounts showed more than 21,000 votes were missed in the county's legislative races alone, although none of the corrected counts changed the election results. The Snohomish County Auditor's Office called Sequoia to analyze the machines.<sup>19</sup>

In case you are not yet convinced, I leave you with a final quote from a news article that appeared in August 2004, shortly after many counties in South Carolina purchased touch screens. They were very late getting their new machines, so:<sup>20</sup>

As part of the federal grant agreement, ES&S will conduct the county's first election using the iVotronic, said Connie Moody, director of voter registration and elections for Greenwood County. The equipment will not go into use until November, she said, when county election staff functions mostly as observers and consultants.

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<sup>17</sup> <http://www.votersunite.org/article.asp?id=3794>

<sup>18</sup> **Electronic voting's hidden perils.** Mercury News. February 1, 2004. By Elise Ackerman. [http://www.mercurynews.com/mld/mercurynews/news/special\\_packages/election2004/7849090.htm](http://www.mercurynews.com/mld/mercurynews/news/special_packages/election2004/7849090.htm)

<sup>19</sup> **County's voting troubles spur changes nationwide.** Seattle Times. January 29, 2003 by Emily Heffter, Times Snohomish County bureau. Archived at <http://www.votersunite.org/article.asp?id=5276>

<sup>20</sup> **Local residents will get to test voting machines.** Index-Journal. August 19, 2004. By Wallace McBride, senior staff writer. <http://www.votersunite.org/article.asp?id=2554>

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***Recommended Reading***

**Corporate Control of the Election Process.** by John Gideon, VotersUnite.Org and VoteTrustUSA. June 15, 2005.  
[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=86&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=86&Itemid=30)

**Corporate Control of the Election Process.** by John Gideon. June 15, 2005.  
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**Corporate Control of Voting Equipment Certification.** by John Gideon, VotersUnite.Org and VoteTrustUSA. June 15, 2005.  
[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=73&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=73&Itemid=30)

**Does ES&S Really Want to Sell the AutoMARK Machines?** May 25, 2005.  
[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=74&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=74&Itemid=30)

**Is HAVA Being Abused?** by John Gideon and Ellen Theisen, VotersUnite.Org and VoteTrustUSA. June 2, 2005.  
[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=75&Itemid=51](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=75&Itemid=51)

**Is the NIST Technical Guidelines Development Committee Working For You, the Voter?** by John Gideon, VotersUnite.Org and VoteTrustUSA. June 2, 2005.  
[http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=72&Itemid=30](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=72&Itemid=30)

**Myth Breakers: Facts about Electronic Elections.** by Ellen Theisen, VotersUnite.Org. April, 2005. <http://www.votersunite.org/MB2.pdf>