

# Computing Professionals for Social Responsibility

## Voting in the United States

It is no secret that the first Tuesday after the first Monday in November is Election Day. On November 2, 2004, millions of dollars, thousands of work hours, and tens of thousands of workers must be devoted to implementing a process born in the eighteenth century using twenty-first century means. In 2000, the focus was on Florida, but the problems in that state were repeated in many others. That presidential year was like any other except for one fact—the deciding margin of victory was only 537 votes. This number is dwarfed by the number of voters disenfranchised according to the CalTech MIT Study “Voting: What Is What Could Be,” which records that between 4 and 6 million votes were lost in the 2000 election.<sup>1</sup> The study attributed the loss to problems with voter registration or polling place practices and problems with ballots. As a consequence, voters received a rude introduction to the reality of elections in the United States—not every vote cast was counted.

Living between the myth and reality—modern election systems struggle to meet the lofty expectations of Americans who view our system of government as superior to other systems of government—including other forms of democracy. The reality of American democracy is that the right to vote was not initially bestowed upon all equally. In 228 years of history there have been four amendments to the Constitution of the United States, the Fifteenth, Nineteenth, Twenty-Fourth, and Twenty-Sixth, each was intended to expand, clarify or define the voting rights of citizens. Most of these efforts came in response or as a result of social, economic, political or military conflicts that used the catalytic forces of free speech to challenge access to the ballot box. The struggle for voting rights has not been exclusively borne by minorities or women; it was also a major struggle of new immigrants from Ireland, and Eastern Europe. The influx of new immigrants, who struggled with poverty and illiteracy during the period of the “Industrial Revolution,” allowed the emergence of machine politics to dominate local governments. The reaction to this political dynamic was the creation of “good government leagues” around the nation. The leagues were successful making changes to the nation’s voting systems through the adoption of the: Australian Ballot or secret ballot system, At-Large city council elections, and civil service reform that professionalized the local, state and federal government workforce.<sup>2</sup>

All seemed well in the body politic until the end of the 2000 Presidential Election, when voters got the message that their votes may not have been counted in the final results. The culprit for the confusion in the Florida election was laid at the steps of voting technology. The Votomatic, or punchcard voting system was faulted for the mistakes made by thousands of Florida voters who intended to cast their presidential ballot for Vice President Al Gore.

## Actions Taken Since 2001

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<sup>1</sup> David Baltimore and Charles M. Vest, “Voting: What Is and What Could Be”, CalTech/MIT Voting Technology Project, July 2001

<sup>2</sup> Dennis R. Judd and Todd Swanson, “City Politics: Private Power and Public Policy, Second Edition,” 1998, Copyrights Addison-Wesley Education Publishers

Following the election's controversial end 33 bills were introduced to address "voting systems" used in public elections. However, the Help America Vote Act (HAVA) became law only after a near death experience in legislative terms. The bill had two dramatically different versions one from the House of Representatives and the other from the Senate. It lay waiting for a conference to reconcile the differences for months and was rumored to be dead by staffers on both sides of the aisle. A resurrection of the bill occurred after a repeat of voting problems in the State of Florida during the September 2002 primary election<sup>3</sup>. The knee jerk reaction by Congress was to pass a new voting law that would outlaw the use of punchcard voting, but they failed to recognize that the problems in the Florida, September 2002 election were all associated with paperless direct electronic recording (DRE) voting machines. The State of Florida in response to the embarrassment of the 2000 election had made dramatic changes in election law and replaced all punchcard voting machines either with optical scan or DRE voting machines.

Despite these facts the final version of HAVA was generally popular among members of Congress, yet received some criticism because it required more stringent voter identification procedures. HAVA passed 92 to 2 in the Senate and 357 to 48 in the House with bi-partisan support. This marked the first time that the Federal government would inject its influence into the conducting of public elections. Two methods were employed: creation of a new federal agency, the U.S. Election Assistance Commission (EAC) and the nearly \$4 BILLION in funds, which among other things would be used to purchase new voting systems and train election workers.

Two things worked against the success of the EAC time and money. HAVA became law on October 29, 2002, but the Commissioners were not appointed until December of 2003 and only received \$1.2 million of the possible \$10 million in funding to begin their work in 2004. The agency was charged with developing new voluntary standards for voting technology with the assistance of the National Institute for Standards and Technology (NIST). Unfortunately, Congress' fiscal year 2004 appropriations did not fund NIST to do work on e-voting technology standards as directed by the HAVA, and in fact cut the Computer Science research laboratory division, the function area that would have done much of this work, by 4% from fiscal year 2003 funding levels.

While attempting to strengthen the integrity of the electoral process by requiring stronger voter identification requirements, HAVA did little to address the potential problems of skewed election outcomes if the electronic voting machines are faulty or rigged. Computer technologists were the political wildcard that raised questions about the use of paperless DRE voting systems for public elections. Starting with a petition initiated by David Dill the message went out that something was very wrong with this technology's broad adoption for public elections.

On May 22, 2003, the first member of Congress to respond to technologists' concerns was Rush Holt (D-NJ), with the introduction of H.R. 2239, the Voter Confidence and Increased Accessibility Act. The legislation became a rallying point for activist who were concerned by what computer scientist were saying about paperless DRE voting systems. To date the legislation has 156 co-sponsors, with only seven of which are Republicans, and this bill is

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<sup>3</sup> Martin Merzer, Joni James and Alfonso Chardy, "Here we go again: Confusion reigns in sequel to 2000 election," Maimi Herald, September 11, 2002.

credited with spurring three separate hearings on the subject of electronic voting in the U.S. House of Representatives. The Government Reform Committee's Subcommittee on Technology Information Policy, the Science Committee's Subcommittee on Environment, Technology, and the House Committee on House Administration each held a hearing on the topic of electronic voting. None of the hearings were held to discuss the merits of Rush Holt's bill, H.R. 2239.

This discussion became front-page news after the publication of what has become known as the Hopkins Report, which exposed serious security concerns regarding the Diebold DRE voting system.<sup>4</sup> This report was compounded by real life disasters have occurred in every primary held in 2004, where DRE voting systems were used.

### **Consequences of the HAVA**

HAVA's provisions to develop voting technology standards have had no effect on the voting technology being used this election year. Further, there were only 30 states that applied to the Government Services Administration for and received HAVA section 102 funds to replace punchcard and lever-voting systems. Following the issues raised by computer scientist, twenty-three of those states requested a waiver to delay the purchase of new voting technology until after they received direction the EAC.

In 2000 the number of voters using DRE voting machines is estimated to be between 9-12% depending on if you were counting only machines or the voters who could potential use them. Although DRE voting systems of some description have been around for nearly 20 years, their adoption was expedited starting in 2001. After the surge in DRE voting use the estimated use for the 2004 election is 30% of the electorate will be casting their ballots on these voting systems. About a third of the nation will have optical scan ballot systems and a third will still be using punchcard or level voting systems.

Early reports from an overwhelming majority of voters have been positive. The exit interview comments abound in the telling of the tale of electronic voting equipment's performance on Election Day "great," "very easy," and "fast". The sad truth is that the voter is the last one to be made aware of problems associated with voting technology. The controversy over the Florida 2000 Presidential election may have come as a shock to the average voter, but it was a well known problem among elections administrators and equipment manufactures—that not all votes were accurately recorded or county in the typical local, state, or national election.

### **Strengthens, Weaknesses, and Consequences of Actions Taken**

The goal of improving voting technology standards and the certification process are very important, but the weak implementation of those key provisions of the HAVA law gives the effort only a placebo effect on the election process.

The consequences of the controversy over paperless DRE voting systems and reports of their failures during this year's primary elections have been greatly diminished public confidence

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<sup>4</sup> TADAYOSHI KOHNO, ADAM STUBBLEFIELD†, AVIEL D. RUBIN‡ and DAN S. WALLACH§ "Analysis of an Electronic Voting System" available at <http://avirubin.com/vote.pdf>

in elections process when these machines are used. There has been a steady stream of reports from across the nation regarding problems with DRE voting systems<sup>5</sup>. At a loss for solutions from vendors or federal policymakers, a number of states have taken matters into their own hands. California's disastrous primary election<sup>6</sup> this year led the Secretary of State to decertify DRE voting systems and required that voters be given the option of voting on a paper ballot for the November election. Nevada worked with its voting equipment vendor to modify their DRE voting system to be fitted with a printer that allowed voters to see their choices prior to leaving the voting station. Unfortunately this quick fix solution threatens the secrecy of voter's choices made in public elections.

### **Progressive Alternatives to HAVA**

Fully fund NIST and the EAC

Increase funding to research and development of voting technology

Revamp testing and certification process for voting technology

Create a certification process for Professional Election Administration

Encourage Professional and Ethics training for local and state Election's officials.

Allow Review of all Voting Equipment Acquisitions

Train and support Election Technology Support Staff

Allow unfettered access to voting equipment testing, preparation and tabulation of election results.

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<sup>5</sup> Verified Voting e-clips web page available at <http://www.verifiedvoting.org/article.php?list=type&type=26>

<sup>6</sup> Anna Oberthur, "California senators want decertification of e-voting systems" USA Today, March 12, 2004 updated March 14, 2004.