



## **CALTECH/MIT VOTING TECHNOLOGY PROJECT**

A multi-disciplinary, collaborative project of  
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### **VOTER REGISTRATION: PAST, PRESENT, AND FUTURE WRITTEN TESTIMONY PREPARED FOR THE COMMISSION ON FEDERAL ELECTION REFORM**

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**Voter Registration:  
Past, Present and Future**

**Written Testimony Prepared for the Commission on  
Federal Election Reform\***

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## **Executive Summary**

The Caltech/MIT Voting Technology Project identified problems with voter registration as a pressing problem in the 2000 presidential election; between 1.5 and 3 million votes were lost due to voter registration problems in that election. Voter registration is a central component of the election management process in the United States, and is an important foundation for how elections are administered. There have been two major efforts to reform voter registration practices at the federal level in recent decades, and despite those reforms there are still significant short and long term issues regarding voter registration practices in the United States. These issues include:

- Continuing to find new ways to make the voter registration process easier for eligible citizens while also making the process more secure.
- Fixing provisional balloting.
- Scrutinizing computerized statewide voter registration files.
- Carefully studying HAVA voter registration requirements and how they work.

These issues are discussed in more detail in the remainder of this written testimony.

## **Background: The Caltech/MIT Voting Technology Project and Lost Votes in the 2000 Presidential Election**

First, a brief introduction to myself and the Caltech/MIT Voting Technology Project.

I am currently a Professor of Political Science at the California Institute of Technology, located in Pasadena, California. I received my M.A. and Ph.D. degrees in political science from Duke University, in 1990 and 1992, respectively. Since receipt of my doctoral degree, I have been on the Caltech faculty, teaching and researching electoral behavior, the electoral process, and other related topics. I have written three books on electoral behavior or the electoral process, and I am now writing my fourth book (on the electronic voting controversy, to be published in late 2006). To date, I have published 39 articles in peer-reviewed academic journals, 18 non-refereed publications, and a number of monographs. Most of my academic research has focused on electoral behavior, public opinion, and the electoral process.

The Caltech/MIT Voting Technology Project (VTP) was initiated while the 2000 presidential election was being contested in Florida. The brain child of Caltech President David Baltimore and then-MIT president Charles Vest, the VTP was instituted to bring the scientific and technological skills of two of the world's most renowned research institutions to study and help resolve the many problems observed in the 2000 presidential election. The VTP issued a highly influential report in July 2001, "Voting: What Is, What Could Be" --- a report that helped influence the 2002 "Help America Vote

Act”.<sup>1</sup> Since that time, VTP members have been instrumental in assisting election reform efforts at the local, state and federal level throughout the United States, and even in some other nations. We have continued our research and policy making efforts, studying all aspects of the electoral process, from the usability and security of the underlying election technology, to issues associated with procedures and processes. We have issued a dozens of studies and reports since 2001, with financial support from the Carnegie Corporation of New York and the Knight Foundation.<sup>2</sup>

As many may recall, the VTP’s early focus was on developing technological solutions to the problems seen in the 2000 Florida presidential election, especially the problems of recording voter intentions and tabulating these recordings. But early in the project, the research team quickly became convinced that there were broader and deeper problems with the electoral process in the United States, problems that were potentially leading to the disenfranchisement of millions of potential votes.

To quantify the potential breadth of the underlying problems with the American electoral process, the VTP team examined a wide array of data, and produced some startling estimates in our 2001 report. We found that of the approximately 100 million ballots cast for president in 2000, there were between 4 to 6 million votes that were lost due to a variety of factors.

First, between 1.5 and 2 million were not counted because they were unmarked spoiled or ambiguous. We found significant differences in the uncounted vote rates across types of voting equipment, with punchcard ballots performing the worst of all the different types of voting equipment then in use. This in itself was a significant finding, one that generated enormous controversy and calls for the acquisition and use of new voting technologies.

Second, we found that between 500,000 and 1.2 million votes were lost due to polling place operations, like long lines, inconvenient hours of operation, or poor location of poll sites.

Third, and most significant for the rest of my testimony, we found that between 1.5 and 3 million ballots were lost due to problems with voter registration. These problems included errors in voter registration databases, problems handling voter registration applications, or difficulties updating voter registration information following a move.

Thus, the VTP’s 2001 study of the 2000 presidential election highlighted that voter registration --- not voting equipment nor polling place practices --- was the source of most of the lost votes in the 2000 election.

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<sup>1</sup> See <http://vote.caltech.edu/reports/2001report>.

<sup>2</sup> See <http://vote.caltech.edu/reports> for a complete listing of these studies and reports.

## Why Voter Registration?

Voter registration has a long history in the United States, dating back to the early 1800's, when many states and localities began using different types of registration procedures to control access to the voting process.<sup>3</sup> Voter registration exists for two fundamental reasons:

1. Registration information is used to control who votes. Only those who are eligible to vote can register, and that eligibility is verified when the individual registers to vote. Also, registration information is used to authenticate voters when they participate (at poll sites, in early voting, or when they vote by mail). Thus, voter registration exists to control access, and to prevent voter fraud.
2. Registration information is used for election management and for other election administration tasks. Voter registration lists contain the addresses of those eligible and registered, and that information is used for many purposes ranging from provision of polling places to insuring that every voter receives the ballot they are supposed to receive when they go to vote. Voter registration is also used to maintain historical information to manage voter lists going forward and to provide evidentiary information in case of a challenge to the outcome of an election.

Today, voter registration is a massive, complex, and dynamic database problem. At the national level, one must keep track of something like 150 million registered voters --- and in a database with 150 million records, and many pieces of information about each registered voter, typographical and other errors are inevitable. Furthermore, our population is dynamic; Americans move frequently (something like 15 percent of eligible voters move each year, according to data from the 2000 Census); new voters are constantly entering the picture, by becoming eligible to vote (turning 18, or by becoming an American citizen); voters are constantly leaving the eligible electorate, either by death or other reasons.

Additionally, in the recent past, voter registration has been a highly decentralized affair. In most parts of the United States, voter registration has been an activity controlled by local governments (usually counties). These local governmental units also have very limited resources for election administration activities, especially coordination of voter registration database activities across government jurisdictions (usually counties). Thus, when a registered voter moves from one county to another within a single state, there often is no simple and efficient way for both counties to simultaneously update their voter registration database for that voter, unless the voter takes the initiative to update her voter registration status in both counties.

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<sup>3</sup> There is a large research literature on the history and effect of voter registration regulations in the United States. An excellent recent examination of the history of voter registration in the United States is by Alexander Keyssar, *The Right to Vote: The Contested History of Democracy in the United States*, New York: Basic Books, 2001.

A last problem with the existing voter registration process is its deployment on Election Day. Despite the rise in early and by-mail voting, most Americans still went to a precinct-polling place to cast their ballot on Election Day. As there are approximately 200,000 polling places throughout the nation on election day, this means that there is a great deal of information that needs to be distributed to a large number of polling locations. Typically each polling place receives a list of those registered to vote in that precinct (and only that precinct); resolving problems at the polling place in the current voter registration list can significantly distract the energy and attention of poll workers.

In general, the VTP has outlined five basic standards that a voter registration system must meet:

1. Registration information must be accurate and complete
2. Registration information must be immune from fraud
3. Registration information must be dynamic and up-to-date
4. Registration information must be usable by election officials at polling places
5. It must be easy for eligible individuals to register to vote

Current and future voter registration systems should be assessed relative to these standards.

## **Voter Registration: Recent Attempts at Reform**

To attempt to meet standards like these, there have been two recent substantial attempts at reform. The first was the passage of the National Voter Registration Act (“Motor Voter”) in 1993. NVRA attempted to establish standards for the purging of voter registration databases, developed some uniform standards for list maintenance, and opened the door for states to allow voters to apply to register to vote at state departments of motor vehicles and other governmental offices. Last, NVRA allowed for other reforms that made it easier for individuals to register to vote (for example, registering to vote by mail).

But while a worthwhile reform, the NVRA might have made the database problem worse. Because voter registration can now occur outside the direct control of election officials, for example by mail, with a form provided by another government agency, or with the assistance of third party organizations, if a voter makes a mistake it might not be caught in time for the voter registration application to be processed --- resulting in an individual who thinks they are registered to vote when in fact they are not. Also, third parties may not forward to election officials voter registration forms in a timely manner --- again, resulting in people thinking they are registered when they are not.

These problems with NVRA, and the obvious problems that arose in the 2000 presidential election with voter registration, led to the significant voter registration reforms of the Help America Vote Act (HAVA), passed in 2002. The most important changes that HAVA enacted to the voter registration process include:

1. Requiring that states adopt provisional (or “fail-safe”) voting procedures (Section 302), and that the states implement methods allowing provisional voters to ascertain the fate of their ballot.
2. Requiring that states implement “in a uniform and nondiscriminatory manner, a single, uniform, official, centralized, interactive computerized statewide voter registration list defined, maintained, and administered at the State level that contains the name and registration information of every legally required voter in the State and assigns a unique identifier to each legally registered voter in the State” (Section 303).
3. Requiring that “an application for voter registration for an election for Federal office may not be accepted or processed by a State unless the application includes” (Section 303):
  - a. “the applicant’s driver’s license number; or”
  - b. “the last 4 digits of the applicant’s social security number”
  - c. for those without a driver’s license or social security number, “the State shall assign the applicant a number which will serve to identify the applicant for voter registration purposes”
4. Requiring that individuals who have “not previously voted in an election for Federal office in the State; or (who have) not previously voted in such and election in the jurisdiction and the jurisdiction in located in a State that does not have a computerized list ...” and who register by mail to provide (Section 303):
  - a. If they vote in person, “a current and valid photo identification; or ... utility bill, bank statement, government check, paycheck, or other government document that shows the name and address of the voter”
  - b. If they vote by mail, “submit with the ballot a copy of a current and valid photo identification, or a copy of a current utility bill, bank statement, government check, paycheck, or other government document that shows the name and address of the voter”

At this time, the states vary widely in the extent to which they have adopted these various HAVA mandates, and the ways in which they have adopted these mandates. This variability has been well documented elsewhere.<sup>4</sup>

## **How Have These Reforms Worked, And What Still Needs To Be Done?**

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<sup>4</sup> See, for example, the electionline.org reports “Election Reform 2004: What’s Changed, What Hasn’t and Why” (January 2004); “Election Preview 2004: What’s Changed, What Hasn’t and Why” (October 2004); “Election Reform Briefing 9: The 2004 Election” (December 2004); “Election Reform Briefing 10: Solution or Problem? Provisional Ballots in 2004” (March 2005); “Election Reform Briefing 11: Assorted Rolls: Statewide Voter Registration Databases Under HAVA” (June 2005). These reports can all be accessed at <http://electionline.org/Publications/tabid/86/Default.aspx>. Also, see “HAVA Implementation in the 50 States: A Summary of State Implementation Plans”, produced by the Brennan Center, DEMOS, the Leadership Conference on Civil Rights Education Fund, and the People For The American Way ([http://www.civilrights.org/issues/voting/hava\\_chart.pdf](http://www.civilrights.org/issues/voting/hava_chart.pdf)).

The 2004 presidential election saw some of the HAVA reforms regarding voter registration in action (for example, the widespread implementation of provisional balloting), while other of the reforms (computerized statewide voter registration databases) are still being implemented in many states. Here I discuss some of the pressing problems that arose in the 2004 election cycle, and others that lurk over the horizon as states move to implement other HAVA reforms on voter registration.

1. We must continue to find new ways to make the voter registration process easier for eligible citizens while also making the process more secure.
  - a. Study how to use electronic technologies to help eligible citizens maintain current registration status, to check on their registration status, and to improve the voting experience.
  - b. Explore ways to continue to minimize pre-election deadlines for voter registration and other reforms that can help make voter registration easier for eligible citizens. Some states are exploring ways to allow eligible citizens to register to vote in person on Election Day, and efforts like these should be tested and studied to determine their efficacy.
  - c. Use the computerized statewide databases to better the integrity and security of the voting process, especially by allowing for new and improved forms of election auditing.
  
2. We need to fix provisional balloting.
  - a. States should be more flexible in allowing provisional voting for individuals in the incorrect precinct. The practice in some states of allowing only individuals who are in the correct polling location to cast a provisional ballot risks disenfranchisement of voters, and needlessly make polling place operations more complicated and confrontational.
  - b. States and localities need to make the provisional balloting process more user friendly and effective in polling places. The usability of provisional ballot applications needs study, and we need to develop better, faster, and more efficient procedures for provisional voting. These reforms range from better training of polling place workers to deal with provisional ballot requests, to better ways to process provisional voters in precincts, to making sure there are sufficient materials in polling places for provisional voters to insure their right to vote is not hampered (for example, making sure there are enough pens and pencils in a poll site so that provisional voters do not have to wait in a line just to fill out their form!).
  
3. We should carefully scrutinize statewide computerized voter registration files as states implement them.
  - a. Electronic and computerized voter registration systems need standards, testing and certification --- just like voting equipment. No standards, testing, nor certification exists now for these databases at the federal level. We are moving into a new era of voter registration; what used to be a “person process” will increasingly become an “electronic process”. However, there is no process at the federal level --- like that for voting

equipment --- that maintains standards for these electronic databases, tests them against these standards, and which certifies them for use. As voter registration files are the backbone of the election administration process, we are running the risk that these electronic databases may not be reliable, secure, or private. At a minimum, a standard set of terminology and procedures with definitions should be adopted to provide some national uniformity in matters relating to voter registration.

- b. We need a common data exchange format for voter registration systems (and for all election management systems). No standards for data exchange between voter registration files and other election administration software (no common data exchange format) currently exists. Without common data exchange formats, the easy transmission of voter registration data between election administration platforms (state to county, or state to state) may not be possible. Statewide voter registration databases should incorporate a common data exchange format for import and export of voter registration data to facilitate management of voter registration lists across jurisdiction boundaries. Not only will this promote intra-state communication of voter registration data, but it will also enable production of useful statistical data and allow for performance analysis.<sup>5</sup>
- c. Provision of these databases to polling places needs examination. Some jurisdictions have experimented with providing voter registration data from the broader jurisdiction in polling places. This can better help polling place workers verify the identification of voters, help them determine if the voter is in the wrong poll site (and help them guide the voter to the right poll site), and possibly help stop some forms of fraud (like double voting across jurisdictions).
- d. How accurate are the databases, and how can data mining techniques be combined with these databases to detect irregularities and possible voting fraud? We simply do not know how accurate statewide voter registration files are, and we need to develop research methods to determine how accurate these databases are. Statewide electronic voter registration files hold great promise as a tool to detect election irregularities and possible voting fraud.
- e. We must work to better utilize the capabilities of computerized statewide voter registration files. The current trend is for states to transition their paper-based voter registration process to an electronic file, without necessarily thinking outside the box to insure that the statewide electronic file will have capabilities that might be important in the future. States should insure that their statewide voter registration databases could facilitate easy signature verification for absentee and early voting applications (given that absentee and early voting are clearly becoming increasingly prevalent throughout the nation). They should allow for future expansion, for example, allowing the addition of voter history

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<sup>5</sup> Further discussion of this point is in a forthcoming report that I have written with Thad Hall, "Knocking Down the Tower of Babel: Electronic Data Transactions Standards for Election Administration", IBM Center for The Business of Government, E-Government Series, June 2005.

information to allow for post-election auditing. They should be flexible so that they might be used in the future to allow voters to check their registration status electronically.

- f. Establish a more definitive interpretation of HAVA requirements regarding computerized statewide voter registration files. Specifically, minimum parameters need to be established that will guide state attempts to comply with HAVA's Section 303. There are currently different interpretations of Section 303, and the states need strong guidance about what constitutes a "single, uniform, official, centralized, interactive computerized statewide voter registration list defined, maintained, and administered at the State level".
4. We need to carefully study HAVA voter identification requirements and how they work. Are states implementing these requirements in ways that impose significant new hurdles for some voters? Are these requirements making election administration needlessly complicated and difficult? Are these requirements successful at combating voting fraud?