# UPGRADING DEMOCRACY

Improving America's Elections
by Modernizing States'
Voter Registration Systems

# Contents

# Executive Summary

America's state voter registration systems need to be overhauled. In the 2008 general election, an estimated 2.2 million eligible Americans were unable to cast ballots due to problems with their voter registrations.[1] Outdated and inaccurate voter rolls and a heavy dependence on new voter registrations submitted by unregulated third-party groups led to troubling questions about the integrity of our elections. To make matters worse, antiquated paper-based registration systems imposed unnecessary costs and administrative burdens on state and county election offices already facing severe fiscal constraints.

America can do a better job. Since 2001, the Pew Center on the States has worked with states to improve their elections by undertaking objective research and removing barriers to innovation and efficiency. Those efforts have led to dramatic improvements in military and overseas voting following Pew's 2009 *No Time to Vote* report, and the growing availability of official voting information over the Internet and mobile technology thanks to our partnership with Google, Inc. and election officials in the Voting Information Project.

Since our election research began, registration has been at the top of the list for reform. In 2008, Pew hosted a pair of summits—*Democracy at a Distance*, which examined military and overseas voting, and *Voting in America: The Road Ahead*, a look at the future of election reform. At both meetings, election officials, policy makers and academics from across the ideological spectrum and all levels of government, as well as professionals from the private and the nonprofit sectors, identified voter registration as the area where reform was both necessary and attainable.

America's voter registration system should protect against fraud and ensure the accuracy of voter rolls.

The consensus was that Americans deserve a more cost-effective, accurate and efficient registration system that protects the integrity of the process and ensures that

more eligible voters—and only eligible voters—are on the rolls. In response, Pew worked with election officials, researchers and technology experts to engage in a far-reaching exploration of how states might modernize voter registration. We identified significant process improvements and new technology that could help states develop more accurate voter rolls and improve their election systems management before, during and after Election Day.

Using these approaches would help states fundamentally fix voter registration while avoiding many of the defects and concerns that have plagued the process in recent elections.

## The Problem

Our current voter registration systems have been unable to keep up with technological advances or with America's rapidly changing—and increasingly transient—society.

The dysfunction is largely systemic. While we are a decade into the twenty-first century, a largely unchanged nineteenth century registration system constrains election offices and stymies voters. Inefficiencies plague the entire process, reducing the accuracy and integrity of state voter files and raising the costs of maintenance.

Much of voter registration is driven by outside third-party groups that solicit and

submit paper registration forms, often in overwhelming numbers late in the election cycle. Election officials have little ability to regulate and manage the process because the current system design relegates them to a largely reactive role. In a race against the clock in the weeks before an election, election officials must manually enter data from millions of paper forms. As a result, taxpayers foot the bill for hiring legions of temporary workers to translate and hand-process those forms. Additionally, costs for printing forms, handling returned mail from inaccurate records and other expenses add millions of dollars to state and local budgets at a time when government offices are struggling to deliver the highest value for every taxpayer dollar.

## The Design: A New Approach

Working with election officials and other experts, Pew identified a way to help election offices modernize their voter rolls by improving the technology they use to capture data about voters and to keep it current.

The approach comprises three core elements:

1. Compare voter registration lists with a wider array of data sources to broaden the base of information used to update and verify voter rolls.

2. Use proven matching techniques and data security protocols to attain the level of integrity and confidence needed to ensure accuracy and privacy.

3. Establish new means for voters to submit information online and minimize manual data entry, resulting in lower costs and fewer errors.

By combining these elements, states could phase out many laborious and error-prone procedures and considerably heighten the level of accuracy, integrity and utility of the registration process.

## The Outcome: Cost-Effective, Accurate and Efficient Voter Registration

While the technology underpinning this design already is widely used in the private sector and other government agencies, its use in elections could transform our nation's voter registration system. Access to more data from a wider variety of sources—coupled with the tools to manage that data—would give election administrators better options for managing their voter registration lists and more control over how they administer elections. By eliminating the need to rely on handwritten registration applications, this approach also shifts much of the control away from outside groups and places it with election officials, where voter list maintenance can be performed more efficiently and accurately, thereby increasing election integrity.

Accurate voter registration lists will improve the entire election system. With such a system, election officials can be confident that the rolls include the most current and reliable information about voters, while excluding invalid records. Eligible voters will find it easier to add and verify their registration information once manual errors are reduced and modern options—such as online voter registration—are offered. The potential for registration fraud will be reduced by using more data sources and employing greater cross-checking to enable states to verify each individual record's accuracy. Accurate lists also will allow political campaigns and nonpartisan efforts to avoid wasting time and money reaching out to registrants who have moved, died, are ineligible, or otherwise are no longer voting in a jurisdiction.

A modernized registration system also will likely result in meaningful cost savings. States can take advantage of economies of scale by sharing the costs of obtaining, exchanging and analyzing data as part of their efforts to maintain voter rolls. States also would benefit from state-of-the-art matching technology instead of relying on less sophisticated methods that are more expensive and less accurate. Finally, a more automated process would require fewer resources and staff to create and maintain voter records, and would reduce printing and mailing costs.

## Online vs. Paper

online
**$.03**

paper form
**$.83**

Average cost of voter registration
in Maricopa County, Arizona
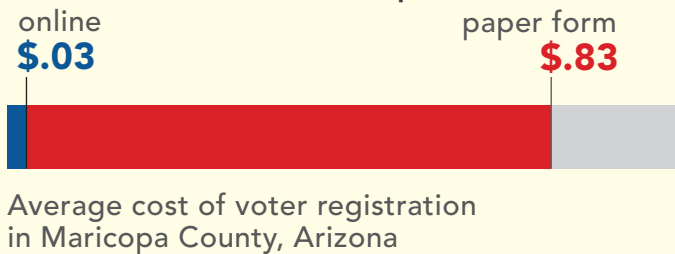
Some jurisdictions already have taken significant steps forward and seen the benefits of modernization. For example:

- In Maricopa County, Arizona, where citizens may register to vote on the Internet, costs were reduced to an average of 3 cents to process an online registration versus 83 cents for a paper form.[2]

- In Delaware, the Department of Elections reduced labor costs by $200,000, and the Division of Motor Vehicles (DMV) reduced its budget by $50,000 in 2009 after introducing the state's paperless eSignature system. The process requires every visitor to the DMV to electronically confirm whether they desire to register to vote, and the system gives them the opportunity to update their voter record immediately. The DMV system electronically syncs its data with official election records in real time.[3] Both systems have not only reduced costs but also have slashed the amount of time necessary to create or update a registration record.

- The states of Washington and Oregon have recently—and successfully—begun to use data-matching to compare the voter lists in several counties in their states. This process captures data on the many voters who move between those states and it better identifies any voter attempt to cast duplicate votes.

States that follow the lead of these innovators will implement a more comprehensive approach and will lead the way to a more cost-effective, accurate and efficient registration system. The resulting systems would offer the level of service and integrity American voters deserve—modern state systems in which more eligible voters are on the lists, invalid records are removed and voters' registrations follow them and remain valid and accurate throughout their lives.

# Voter Registration in the States

In the United States, the voter roll is the gateway to participation in the electoral process. It also is a critical line of defense of the election system's integrity, representing a clear demarcation between eligible and ineligible voters in an election.

In almost every state, the voter registration process is the entry point to the voter list. Registration is designed to give a jurisdiction the information it needs to answer three essential questions about a prospective voter:

- **Identity**—who is this individual?

- **Eligibility**—does this individual meet the requirements for inclusion on this voter list?

- **Contact information**—where should the jurisdiction, political campaigns and other authorized users send information related to voting?

In every jurisdiction, this information is supplied by the voter—typically by submitting a paper application to unregulated third-party groups,

including political campaigns, nonprofit groups and private vendors. This information is then received by election offices, where the data are manually entered and (if deemed eligible) the individual is added to the voter list. Any change to a voter's information—including a name change, new address, or change in party affiliation—also is supplied by the voter and is subject to the same data entry and processing requirements by election offices.

## America is Changing, but Voter Registration is Lagging Behind

To perform the twin roles of gateway to voting and defense against fraud, voter registration systems must maintain accurate, up-to-date information. Yet, the outmoded design of the current system increasingly breaks down, presenting barriers to both voters and to those who administer elections.

Americans no longer live and work (and thus vote) in the same place their entire lives as many did in the late nineteenth century when voter registration systems were first put in place. As we entered the twenty-first century, the pace of modern life accelerated, and the ways in which we interact with one another, the private sector and our government have changed dramatically.

Americans are more mobile than ever before. It is estimated that about one in

eight Americans of all ages moves each year, many seeking opportunities in new communities.[4] Some Americans—including individuals serving in our military, young people and those living in communities reeling from the economic downturn—are even more transient. For example, census numbers from 2009 reveal that one in four adults ages 25 to 34 changed residences last year.[5] In Clark County, Nevada, a place hit particularly hard by home foreclosures, 20 percent of active registered voters moved from the address listed on their voter file in the six months spanning the end of 2009 and the beginning of 2010.[6]

Despite such major societal changes, our paper-based registration system has been slow to adapt.

To add new voters to registration rolls and keep lists up-to-date, elections officials are placed in a largely reactive role, dependent on voters and unregulated third parties. As a result, millions of paper applications are submitted at the last minute before election cycle registration deadlines.[7] Far too often the registration forms are incomplete or they present duplicate or conflicting information.[8] In response, local election officials must redirect a significant proportion of their limited resources to hiring hosts of temporary data entry staff to manually process and verify registration applications,

at a particularly busy time when other tasks, such as recruiting and training poll workers and preparing for Election Day, also must be done.

Considering the level of confusion about how to register, the problems that arise are unsurprising. The Cooperative Congressional Election Study (CCES), which conducted the largest national survey of voter experiences on Election Day in 2008, found that one in four voters assumes election officials or the U.S. Postal Service will update his or her voter registration automatically with each move,[9] which is almost never the case. The same survey found more than half of the voters asked were unaware they could revise their voter registration information at state motor vehicle agencies, as mandated by the National Voter Registration Act (NVRA).

While uniform audits of voter registration lists have not been undertaken, a Pew-funded study of two jurisdictions found that 12 percent of voters in Florida and almost 10 percent of voters in Los Angeles County had at least one significant inaccuracy in their voter record, such as a wrong address, name or date of birth.[10] (Such findings are consistent with Canada's experience, where top election officials expect that around 17 percent of their federal list will become outdated yearly, primarily due to people moving, but also due to deaths and new voters.[11])

## Problems in the 2008 Election Cycle

In 2008, millions of voters who believed they had registered discovered they were not listed on their precinct voter rolls when they arrived at the polls to vote. The Performance of the American Elections survey, conducted by the Massachusetts Institute of Technology (MIT), found that 2.2 million votes were lost in November 2008 due to registration problems.[12]

## 2.2 Million

Number of votes lost in November 2008 due to registration problems

Similarly, the CCES found that 5.7 million people faced a registration-related problem that needed to be resolved before voting.[13] The most frequent hurdle was incorrect or outdated information in a voter's registration record. In analyzing the more than 2 million provisional ballots issued at polling places, almost half of the ballots for which we have detailed data were ultimately rejected because the voter did not appear on the registration rolls.[14]

Not surprisingly, mobility is the top factor predicting whether voters will have a registration problem. According to CCES data, people who moved within the two years preceding an election are the most likely to have registration-

related difficulties at the polls.[15] Mobility issues particularly affect military personnel—especially those deployed overseas and their families—and such problems were pronounced in 2008. According to CCES, members of the armed forces were almost twice as likely to report registration problems as was the general public.[16]

Mobility is a key factor affecting registration problems and has a disparate impact on military personnel.

In 2008, the system also was plagued with questions about the motivation, accuracy and quality of the voter registration campaigns conducted by political campaigns, nonprofit groups and vendors. Although the current system depends on these third-party groups to populate and update voter registration rolls, impassioned critiques and lawsuits arise each election cycle accusing such groups of submitting applications that are late, illegible, contain fictitious names, or reflect information already on the voter rolls. One study after the 2008 election found that nearly one-third of the registration applications submitted by some outside groups had little or no value, resulting in neither a new valid registration nor an update to an existing one.[17]

Inaccuracies in registration records are problematic beyond Election Day. Less visible, but as significant, is the work performed by election officials throughout the year to maintain voter lists by finding and removing so-called "dead wood," or people whose registrations are no longer valid because they have moved, died or their status has changed.[18] Voters—and taxpayers—pay a high price for a system that is often incorrect because it relies on outdated information, manual review processes (including interpretation of handwritten applications), limited data sources and significant amounts of paper to compile and update voter lists.

## The High Costs of Voter Registration

Compiling data on election costs and undertaking an analysis of the return on investment is exceptionally difficult because there is no consistent source for budget and program information. From the reports of election offices and the independent studies that have been undertaken, it is clear that our nation's paper-laden, labor-intensive system is adding millions of dollars to state and local election costs that could be eliminated.

According to a Caltech/MIT Voting Technology Project's survey of election office budgets in the United States, county and local election offices spend approximately one-third of their budgets

just on voter registration.[19] In some locales, the total is even higher. In Forsyth County, Georgia, for instance, nearly half the county's $1.4 million budget is spent on voter registration.[20]

A recent Pew study found that voter registration in Oregon cost state and local taxpayers more than $8.8 million in 2008. Each transaction, whether creating a new record or updating an existing record, costs well upward of $7.00 on average.[21]

These costs do not include the millions spent every cycle by advocacy groups, community organizations and political campaigns to register voters outside the direct supervision of election officials[22] or the amount such groups spend to employ private data vendors to update voter lists rife with errors.

## Signs of a Better Way

Many jurisdictions have begun experimenting with elements that modernize aspects of their systems while cutting costs. For example, in Maricopa County, Arizona, which has operated an automated online registration system since 2002 (the first of its kind in the nation), a study of the 2008 election cycle found that processing each automated online registration cost an average of only 3 cents. By contrast, processing each paper registration form costs on average 83 cents.[23]

Similarly, in 2009, Delaware implemented its eSignature system to register voters and update their information automatically and in real-time through an online process at the state's Division of Motor Vehicles (DMV) offices. In its first year alone, officials reported that state costs were reduced by $250,000 by removing paper application forms and related processing tasks from DMV and county election offices.[24] Kansas also reported savings and indicated some counties have reduced the time spent processing registration forms by half since the state's motor vehicle agency implemented online procedures in mid-2008.[25]

Additionally, at least 17 states share and compare statewide registration databases, typically on a one-to-one basis, under interstate compacts, to gather more information and improve their ability to serve their voters.[26] For example, because of the high mobility rates of residents between Oregon and Washington, the two states decided to compare registration data to identify potential duplicate records in 2008.

The states identified more than 47,000 possible pairs of records that qualified for review, under state-determined standards, and ultimately they conducted outreach to voters in border counties that led to the cancellation of more than 700 duplicate registration records.[27] The study also identified 12 potential double voters who, had the matching protocol been in place sooner, could have been turned over for

prosecution where justified.[28] Officials from both states tout cleaner registration lists because of the project.[29]

Broadening the effort to modernize registration can yield even greater cost savings. In the mid-1990s, election officials in Canada moved to a system of government-compiled voter lists using database technology and government outreach. The Canadian federal government estimates it has saved more than $100 million since creating a system for federal elections that served 20 million voters in 1996.[30] The system cost $9.75 million to build in 1996.[31] Using this system, in 2008, Canada captured 83 percent of its eligible voters on the rolls,[32] at a cost of just over $6 million, for a per voter cost of less than 35 cents.[33] While Canada's system differs in some critical respects from the potential solutions presented in this report (particularly because Canada uses a federal database), the examples of cost savings in particular are valuable, because the type of data-sharing it uses bears substantial similarities to the system redesign we propose.

## STATE INNOVATIONS

A growing number of states are taking steps to modernize their voter registration systems. In 2008, close to half a million Arizona voters went online to register or update their existing registration.[34] Since 2008, seven states, in addition to Arizona and Washington, have either offered or passed legislation to implement online voter registration.[35] In Kansas and Delaware, eligible voters who visit a state motor vehicle office can register via an electronic process that securely sends all of the required information to local election offices via the Internet. Delaware's eSignature program not only cut costs in 2009, but officials reported the average time needed to register or update voter information fell from 90 seconds to 30 seconds per record, primarily because the process became paperless.[36]

Other states have begun experimenting with ways to streamline operations and improve the accuracy of their voter rolls. At least 17 states share voter lists with neighboring states to try to identify duplicate registrations and eliminate outdated files from the rolls.[37] Officials in some of those states say that a potential next step would be to enable more comprehensive sharing of active voter registration records—including across state lines—to allow jurisdictions to actively follow voters who move and to affirmatively add eligible voters to the rolls.

# A Comprehensive Approach to Modernizing Voter Registration

In response to the election flaws that came to light during the 2008 elections, many states are trying to find innovative solutions, including the use of information technologies that go well beyond federal requirements. This report lays out practical steps states could take to build upon these efforts toward a more comprehensive solution.

Voter registration should achieve the standards Americans demand as voters and taxpayers: a nonpartisan voter registration system that attains the highest level of performance measured by accuracy and integrity, cost-effectiveness and efficiency. While states face many common challenges, each state also has unique characteristics. With this in mind, the modernization plan is designed to be flexible, allowing state officials to adapt components and approaches to fit the needs and capacities of their states.

## The Voter Registration Modernization Design Working Group

In mid-2009, as public dialogue on the issue increased in the media and in Congress, Pew convened a working group of 42 experts, including state and county election officials from 21 states, as well as scholars and technology specialists (see Appendix). In a series of four meetings during 12 months, the group sought to identify the weaknesses of the current system; analyze the feasibility of practical, technology-based reforms; and recommend implementation strategies for states.

The working group's members are no strangers to change and innovation. Virtually all saw their states make the transition to new voting technology and assisted in creating statewide voter databases following the adoption of the Help America Vote Act (HAVA). Research and input from the group suggested that the introduction of modern information and data tools into voter registration systems would allow better results in compiling, updating and verifying voter data.

## Building on HAVA

The working group recognized the value of the federal government's investment in creating statewide registration databases to replace inconsistent

county-by-county voter lists, and it followed a strategy to build on the progress spurred by HAVA.

In addition to creating statewide computerized lists, HAVA initiated basic data matching protocols for voter lists, with a directive that states should attempt to verify the identifying information on a voter registration application by electronically comparing it to the registrant's driver's license or to the last four digits of his or her Social Security number (SSN4). The National Association of Secretaries of State (NASS) reported in September 2009 that 41 states have matching procedures using motor vehicle data and 40 states have procedures using SSN4 data.[38] NASS also reported that 34 states use the U.S. Postal Service's national change of address database to update voter files.[39] Some states have even used their statewide voter lists as the basis for interstate cooperation to identify likely duplicate registrations.[40]

Although HAVA's registration-related requirements were intended to improve state voter rolls and bring new information technology—namely basic database matching—to election administration, the overall results have been mixed. High error rates from SSN4 matching led to litigation during the fall of 2008,[41] when some groups sued to require state authorities to resolve thousands of "non-matches" prior to Election Day.[42] The National

Research Council of the National Academies recently criticized these matching protocols, saying post-HAVA procedures "do not reflect the state of the art in matching techniques, and have not been validated scientifically, in the market, or otherwise."[43]

To fully realize the potential of the new voter registration infrastructure, states need to adopt proven practices employed in the private sector: comparing voter registration lists to a wider array of data sources to update and verify records; using proven matching techniques and data security protocols to attain the level of integrity and confidence needed; and establishing means for voters to submit information online to minimize manual data entry and to put voters in control of their own registration records.

## Approaches Employed in the Private Sector

For years, enterprises such as banking, gaming, law enforcement and political campaigns have applied database search and matching software to cross-check multiple data sources to compile the most accurate and up-to-date information to build their databases and serve their customers.[44] To do so, the private sector has developed widely accepted rules, information technology standards and secure data transmission protocols to meet business needs.

## More Data In: Better Data Out

The private sector consistently draws upon a much wider array of data sources to verify an individual's information than is currently used by election offices. Bringing this same approach to voter rolls—specifically, comparing registration records against data from multiple sources and multiple states (see Exhibit 1)—would enable election officials to ensure that their files reflect the most up-to-date and accurate information on eligible voters in their jurisdiction.

> Comparing registration records against multiple data sources and states results in more accurate voter information.

The data matching process conducts sophisticated analyses by comparing source data with multiple other data sets. Even if some data contain outdated or inaccurate information, using multiple data sources will make the system work better because the matching engine's analyses are strengthened when cross-checking more records.[45] When multiple sources are used, it becomes easier to identify the outlying (incorrect) data.

For example, if a state used only a name and date of birth protocol to verify identity, it would not be as strong as using a name, date of birth and the last four digits of a Social Security number or driver's license information. But if a state also used addresses from other state agency records—such as tax or public assistance records where individuals may be more apt to regularly update their information—then the results would be more reliable and more likely to be matched to other records. Similarly, if an individual's address histories from commercially available sources were added—something states do not track—the matching and evaluation process and the quality and accuracy of the resulting data would be further improved.

In short, the formula for voter registration modernization is simple: more data in, better data out. Using more and better source data accompanied by proven matching protocols greatly improves the confidence that electronic matching will produce accurate results. Replacing many manual, paper-based procedures with digitally compiled and electronically transferred voter information would help election officials to better manage, if not eliminate, some of the existing bottlenecks.

Exhibit 1

## Using Multiple Data Sources to Improve Matching

The addition of databases with residence history can aid in making correct matches, eliminating false ones and updating current voter rolls.

### RECORDS CANNOT BE MATCHED WITH FULL CONFIDENCE

**Two voter records** with a similar name and same date of birth in neighboring states could be the same person, but data from state databases are insufficient to match with certainty.

**Oregon** voter registration record

**Mark R. Smith**
DOB: 4/13/1967
4 Main St. Salem, OR
SSN: XXX-XX-9876

**Washington** voter registration record

**Mark Smith**
DOB: 4/13/1967
10 Spruce Ln. Seattle, WA
DL: AB123456
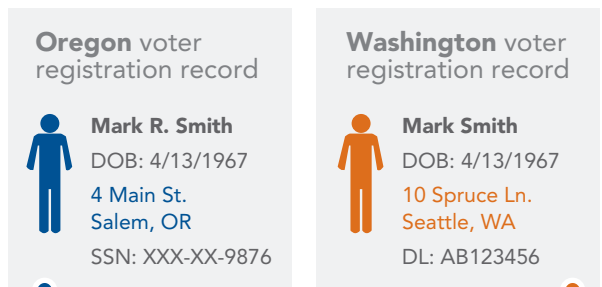
### ADDITION OF MORE DATABASES ALLOWS FOR BETTER MATCHING

The **addition and linking of multiple databases** with different data allows for voter records to be matched ...

**Mark Randy Smith**
DL: AB123456
SSN: XXX-XX-9876

... and **address histories** can confirm which is the current record.

| | |
|---|---|
| 10 Spruce Ln. Seattle, WA | 2008–present |
| 4 Main St. Salem, OR | 2005–2008 |
| 600 70th St. New York, NY | 1996–2005 |
| 5 Bay Ave. Tampa, FL | 1984–1996 |

NOTE: Multiple databases can be used to ensure an accurate match.

Oregon registration can be **coded as inactive**

**Mark R. Smith**
DOB: 4/13/1967
4 Main St. Salem, OR

Washington registration is **confirmed**

**Mark Smith**
DOB: 4/13/1967
10 Spruce Ln. Seattle, WA

SOURCE: Pew Center on the States, 2010.

## Using Proven Matching Techniques and Security Protocols

While volume is a key factor in achieving accuracy, the private sector has made advances in refined matching techniques and security safeguards.

The elections field, with the help of firms that offer specialized expertise and a deep familiarity with best practices, also can employ these innovations.

Voter registration lists pose unique privacy and security issues because, by definition, most of the data in the lists are made public so that campaigns, political parties and advocacy groups may contact and mobilize voters. States and counties have established protocols to protect information that is exempt from public disclosure while still providing useable data to those who seek to engage voters. For instance, while many states now include voters' driver's license number or last four digits of their Social Security number in voter files (so that the records can be matched pursuant to HAVA), such information is not public information and cannot be accessed by outside groups.

To keep confidential data secure and to detect and guard against any unintended use, the private sector establishes comparable restrictions on permissible data usage and relies upon encryption technology, restricted access and comprehensive audits to log any change to or use of data sets.

State-of-the-art software allows sensitive data to be flagged before being entered into the system and then anonymized (by encryption) so the data can be used in matching analyses but not disclosed in system outputs or reports. By employing irreversible data anonymization, anyone trying to access a system without authorization would find confidential data opaque and unusable.[46]

In addition, standard procedures restrict access to data sets to a limited number of authorized users, each authenticated in a unique way, to control user privileges and allow tracking of all actions taken in accessing or changing data. Banks use such features for electronic transactions, including the transmission of data over secure networks to guard against hacking and fraud.[47]

## Creating Online Portals and Automated Systems for Voters

Although harnessing data from available sets offers a critical source of information, customers remain the best source of accurate data and they retain rights to control their information. It is now standard practice for most of us to use online portals to update and check the information on various sites,

including retailers, schools and insurance companies. As mentioned previously, groundbreaking states have already proven the value of online sites for voters to register, update and monitor their records both on home computers and when transacting business at motor vehicle agencies. These systems dispense with the intermediate step and cost of data entry by election offices and they provide voters with a heightened level of control over their information.

For businesses, federal mandates also have established important standards and protocols such as the opt-out provisions established in the "National Do Not Call Registry" and the transparency standards in the federal Fair Credit Reporting Act (FCRA) for personal financial information. FCRA standards offer individuals the right to view their personal file, see who has viewed their information, examine changes in their records and fix mistakes—balancing privacy rights while showing the public how their information is being used.

In addition, some states, such as Delaware, have experimented successfully with technology that allows citizens, whenever they have any contact with their government (most notably motor vehicle agencies) to update their voter registration information. These technologies have proven to be inexpensive to implement, and yet they result in substantial cost savings almost immediately while improving the accuracy of voter information.

As a result, voters receive better service from their government, while government saves money and ensures the accuracy of its records. We are moving toward a time where citizens will no longer have to pass on the same information to multiple departments of the same government. Rather, government will improve interagency communication to better serve their citizens.

# Modernizing Voter Registration: Implementation Steps for States

Although the technology to modernize state voter registration rolls already is commonly used in private industry and other government agencies, challenges will arise. However, these challenges are largely administrative and legislative (rather than technical), and they can be addressed.

To achieve the reforms contemplated by this comprehensive approach, participating states would:

- Join with other states to submit data from multiple sources to a common data exchange where those data would be matched and processed

- Use data generated from the common exchange to streamline the processes for:

  - Updating records of registered voters in a jurisdiction (e.g., correcting information when voters have moved, changed their names or died)

- Enabling eligible voters to get on the rolls subject to confirmation consistent with state law

- Removing duplicate and invalid records, as well as ineligible individuals

- Offer an online portal where voters can register for the first time or update their records as well as providing improved technology at motor vehicle offices and public assistance agencies to streamline the process

- Provide means for eligible voters whose data contain errors to correct or update their information

## The Foundation: A Common Data Exchange Controlled by the States

The experiments in data matching that have been undertaken by groups of states to date have been isolated and episodic. While the technology exists—and thus, in theory, states could undertake these tasks in-house—most states lack the resources, software, hardware or expertise to do so at the scale and level of sophistication needed. The solution—an independent data center for registration information that is governed by participating states—would take advantage of economies of scale to achieve maximum cost savings and acquire the level of expertise necessary to competently match a much wider array of datasets and employ state-of-the-art matching and security protocols.

As a separate entity governed by the states, the center's sole purpose would be to provide sophisticated analyses of voter registration files enabling states to take whatever action they deem appropriate, consistent with state and federal law. Subscribing states and counties would submit a range of data sets to create, verify and update voter registration records. While the center could accommodate any state data sources that might heighten the accuracy and confidence in its reports, it is anticipated that, at a minimum, participating states would submit their current voter lists and motor vehicle data. The data center would standardize, collate and match these data (see Exhibit 2).

Where there is a high probability that new information has been gathered on a registered or eligible voter, the data center would flag the record for officials along with the reason(s) why, so officials can follow up as needed. As new data are entered into states' voter registration systems, those data would be fed back into the center. Refinements would occur on an ongoing schedule as these state updates are received and as new information is loaded from other government and commercial data sources against which state lists can be matched, further improving the quality of the registration lists and ensuring they are as up-to-date as possible.

Each state would continue to maintain its separate and independent voter registration database and would control both the policies and practices for determining eligibility and how to handle the following:

1. Updates to existing records

2. Unregistered voters who the data indicate are eligible or may be eligible

3. Evidence of individuals voting more than once or other possibly fraudulent activity

Although data matching would inform decisions about individual voter records, it would not require election offices to take action. The matching process would involve creating business rules and data protocols to meet election officials' needs and then fine-tuning the process to accommodate the unique strengths and weaknesses of source data. The reports received by participating states would indicate what level of confidence the center has in the data, and what sources contributed to the match, while sequestering private information.[48] Any resulting action on a voter record would be at the discretion of states or localities consistent with existing law and current practice.

## The Benefits of a Shared Resource

By jointly operating and controlling the data center, states gain a vehicle focused on the unique needs of the elections field, achieve significant economies of scale and ensure that they are employing state-of-the-art matching and security protocols. The center's data and analyses would be established only for the purpose of assisting states with their voter registration process. In establishing the bylaws and governance structure, states would incorporate necessary contractual and legal protections to ensure that the data residing in the center would be protected from disclosure and protected from use for any purposes not related to voter registration in the states.

> Voter registration databases would continue to be independently maintained and controlled by each state.

Through this shared vehicle, the states would benefit from economies of scale and the resulting cost savings due to shared data acquisition and overhead. Data such as U.S. Postal Service National Change of Address information, Social Security death index data and other consumer data (e.g., commercially available address histories) could be acquired and processed by the center at a much lower cost than if each jurisdiction acquired and processed the data separately. Moreover, greater participation by states as exhibited by the

# BASIC DESIGN OF A DATA CENTER

**An independent center would consist of three main elements—data sources entered into the system, a data matching engine and reports delivered to the states.**

## Data Sources

The following are some of the data sets that subscribing states could input into the independent data center and the common data from which all states would benefit. (Key data elements are noted parenthetically.)

**State-based data sources likely would include:**

- Existing statewide voter registration lists (the baseline)
- Motor vehicles agency data (address, possibly citizenship)
- Data from an online voter registration portal (new registrations, updates)
- Public assistance agency data
- Felon data

**Common data sources likely would include:**

- Widely available commercial data (individual address history*)
- National Change of Address (postal address changes)
- Social Security death records (list maintenance, file removal)
- Military data (current contact information for military members and their families)

**Other possible state and federal data could include:**

- Widely available public records (property tax records, for addresses only)
- State tax data
- University data (student names, ages and addresses)
- Naturalized citizens (citizenship)
- State death record data

*(continues)*

## BASIC DESIGN OF A DATA CENTER *(continued)*

### Data Matching Engine

This component of the data center would match the identities presented by the various data sources and compile a unique "folder" for each individual based on all of the data fed into the system (including the current statewide voter database). Those records would then be placed into categories such as: already registered voters; eligible individuals not yet registered to vote; potentially eligible individuals not yet registered; duplicate voter registration records; voters who have moved; deceased persons and otherwise invalid registrations. Other categories could be created as necessary or as states desire, such as categories identifying for investigation those who appear to have voted more than once in multiple jurisdictions. Confidential information, such as Social Security numbers would be converted into anonymized (encrypted into non-human-readable, non-reversible) values, to protect privacy and prevent disclosure.

### Reports to the States

States would receive regular reports that would allow election officials to select and tailor data reports ranging from individual voter files to county, state, or interstate results. For example, an official could download a report of individuals who appear to have duplicate registrations or who may have voted more than once, a report of individuals eligible to vote in their jurisdiction who are not yet registered, or a report showing individuals who are potentially eligible (though eligibility cannot be confirmed from the data provided) so that officials can contact these individuals regarding missing information. Subscriber states also could define and customize specific reports from this interface in whatever data formats they desire (e.g., a simple flat CSV file or an XML file, two common database formats), and define the means for delivery of the electronic reports.

* Commercial credit reporting agencies collect current and previous address history along with name, birth date, Social Security number, spouse's name and other information. For more information, see http://www.faqs.org/docs/consumer/credit.html. Information about individuals' credit histories, or any other private data not directly related to eligibility to vote, would not be accessed or stored in any way.

state data they contribute would improve the data mix and resulting accuracy of the system's analyses and, ultimately, state voter rolls.

An independent data center also would create a layer of separation between the center's data and the government data systems hosting official voter registration lists, thereby preserving current government security measures and the integrity of the state-based lists by ensuring that only state and local election officials have the ability to update official records. To offer the level of integrity expected by the public, the center must employ the same level of privacy and security protocols used in the private sector, including the adoption of proven encryption technology and rules restricting access to the data and comprehensive audit logs.

## State and Local Architecture

The data matching center is only one piece of the overall design. State and local officials will need to develop systems to manage the data sources going into the center on the front end as well as use the information provided by the data center on the back end.

Ideally, states would implement practices to ensure that they provide the data center with accurate, timely data. For instance, states that do not already have an online portal to enable voters to register, review and revise their official records would benefit from creating one. Most county and state websites already include mechanisms for the public to ask questions or to complete and submit official government forms electronically; Arizona and Washington have demonstrated that such online portals offer a secure and easy method for voters to apply, update and verify registration information.[49]

Given the limited Web access of some voters, such online portals should not be the only way voters can access the system, but Web-based systems can provide a cost-effective means of reaching a growing segment of the population, especially young people, members of the military and other highly mobile individuals who face particular registration challenges. Further, using online technology can free up resources to reach out to those who are on the other side of the digital divide.

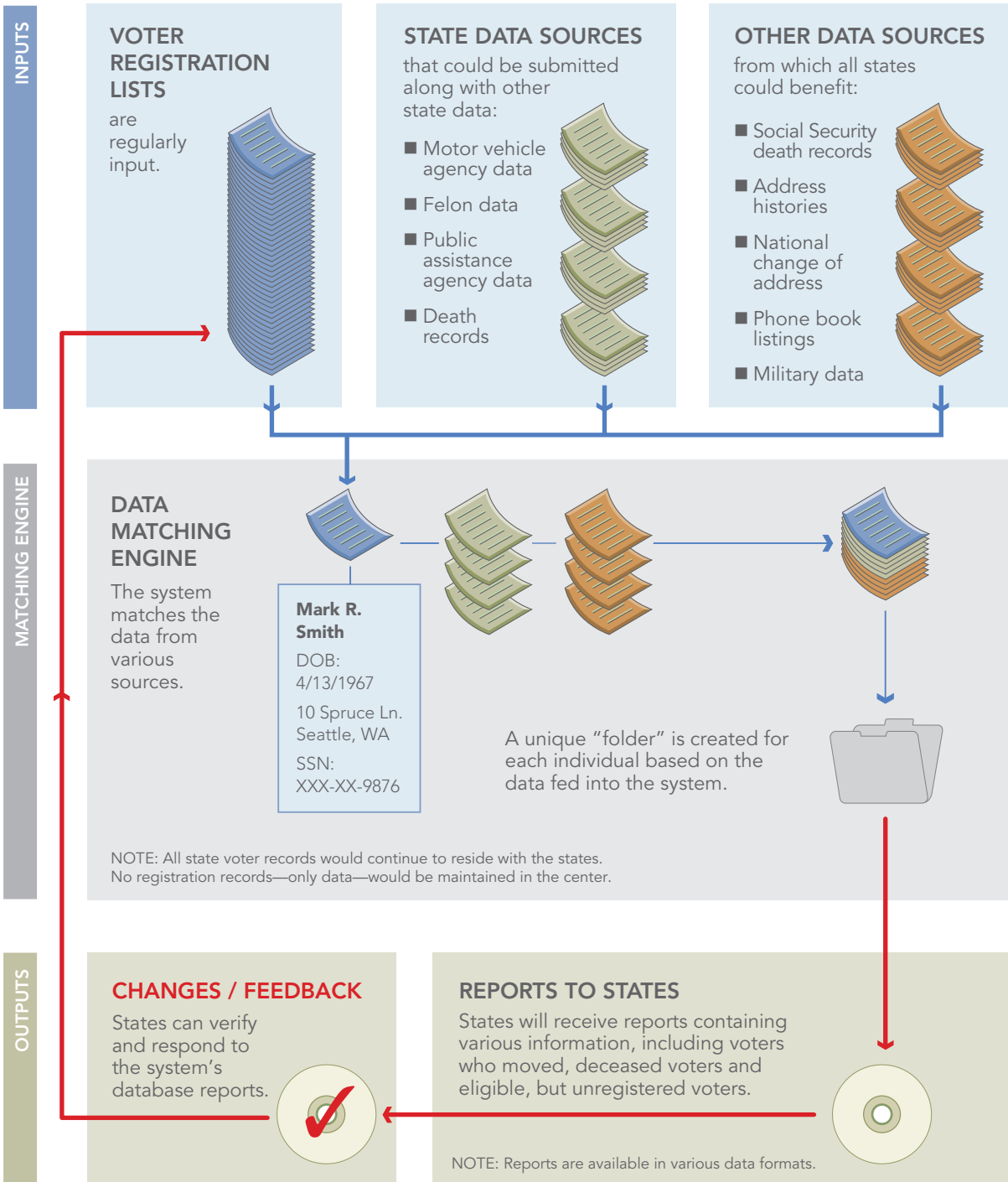## Using the Center's Information-Rich Reports

States receiving data center reports would need to determine what actions to take in response to the information provided, which could include the following:

- Registrants who have changed their names, addresses or other information

Exhibit 2

# How a Data Center Would Work

The system would have three main parts: **inputs** of data on eligible voters; a **matching engine**; and a system of **outputs** that would provide participating states with up-to-date information about their eligible voters.

**INPUTS**

### VOTER REGISTRATION LISTS

are regularly input.

### STATE DATA SOURCES

that could be submitted along with other state data:

- Motor vehicle agency data
- Felon data
- Public assistance agency data
- Death records

### OTHER DATA SOURCES

from which all states could benefit:

- Social Security death records
- Address histories
- National change of address
- Phone book listings
- Military data

**MATCHING ENGINE**

### DATA MATCHING ENGINE

The system matches the data from various sources.

**Mark R. Smith**

DOB: 4/13/1967

10 Spruce Ln. Seattle, WA

SSN: XXX-XX-9876

A unique "folder" is created for each individual based on the data fed into the system.

NOTE: All state voter records would continue to reside with the states. No registration records—only data—would be maintained in the center.

**OUTPUTS**

### CHANGES / FEEDBACK

States can verify and respond to the system's database reports.

### REPORTS TO STATES

States will receive reports containing various information, including voters who moved, deceased voters and eligible, but unregistered voters.

NOTE: Reports are available in various data formats.

SOURCE: Pew Center on the States, 2010.

- Registrants who have died, moved or lost their eligibility due to felony conviction or other disqualifying change in status under state law

- Registrants who have voted more than once or who otherwise have broken election laws

- Unregistered individuals who are definitely eligible to vote (e.g., individuals who at some point have documented citizenship with a government agency, such as a motor vehicles bureau) and unregistered individuals who are potentially eligible to vote (e.g., cases in which states have not collected data on potential voters' citizenship status)

Because authority is retained at the state level, these topics sparked a vibrant discussion and generated a wide range of approaches within the working group. States undertaking modernization plans will need to determine how to use technology to streamline processes to the greatest degree possible, while preserving the integrity of their lists. Some issues to be considered by states include the following:

- When, if ever, should a state simply update its voter rolls based solely on information supplied by the data center (such as a new address or a name change)

- Whether some data sources should receive a higher priority than others in suggesting changes to individual

records; and, if so, what are the criteria for acceptable data matches

- Whether and how to reach out to voters—including those new to the list and those already on the rolls—when the data center suggests changes to their records

- Whether and how to allow voters to see and make changes to their voter records (such updated records could become a source of information for the data center going forward)

States' responses to each of these considerations will result in a "standard operating procedure" for using the data center to maintain voter rolls and will give each state the freedom to calibrate its procedures as time and circumstances warrant.

## Cost Considerations

The modernization efforts discussed in this report should produce noteworthy cost savings for states, as shown by the transition to electronic processes in Arizona, Delaware and elsewhere. However, in the short run, some start-up costs will be incurred. These costs would be associated with reconfiguring computer systems within participating states to integrate the data center's reports to take full advantage of new data they will receive. Although the exact amount of such initial expenditures would need to be determined by each state, it is likely such costs could be recouped in the course of one or two election cycles. Some states may be able

to tap existing HAVA funds to pay for any necessary capital expenditures.

Pew has committed significant resources to facilitate the development of a data center and to provide the technical support necessary to bring states onboard. We are dedicated to helping states provide data for the system and prepare to administer the system cooperatively.

Although states may incur some short-term costs associated with adding more eligible voters to their lists, jurisdictions could offset these costs by identifying and removing "dead wood" and outdated voter files at the same time. Thus, any growth in voter lists should be offset as a result of cleaner data, which will result in savings in other areas, such as hiring fewer temporary workers, reducing mailing processing and fees and decreasing printing costs.

Finally, the states also would share the costs of operating the data center, although the annual costs per state are expected to be significantly less than the cost savings generated annually through the use of the data center.

## Failsafe Registration Options

Data management, no matter how good the underlying data and processes, never yields a perfect product. There always will be a small number of eligible voters whose information is inaccurately listed despite their own best efforts. While voters will no longer be the only source of information for voter rolls,

states will nonetheless need to give eligible voters who have taken appropriate steps to register an opportunity to view and correct their information so they may cast a ballot that will be counted.

For many years, states have relied on a variety of procedures to help these voters. While HAVA nationalized provisional balloting in 2002, states have their own history of Election Day safeguards for eligible voters, many of which predate HAVA and are still in use.

Six states (Idaho, Maine, Minnesota, New Hampshire, Wisconsin and Wyoming) have offered registration on Election Day for years, allowing eligible voters to show up, document their credentials and vote by regular ballot. Iowa, Montana and the District of Columbia recently joined these ranks, while North Carolina allows voters an opportunity to "one-stop" register at early voting locations. Other states, such as Michigan and Vermont, created an Election Day affidavit process that allows individuals to cast a regular ballot if they swear under penalty that they registered to vote. Additional states, including Kentucky, allow poll workers to affirm an unlisted voter's identity. Finally, 19 states either do not require registration or allow for some sort of registration on Election Day for certain segments of the electorate (e.g., military voters). Given such provisions, it is clear that many states are familiar with Election Day administrative practices and already have existing procedures in place.[50]

# THE CURRENT VOTER REGISTRATION SYSTEM VERSUS A MODERNIZED SYSTEM

| CURRENT | MODERNIZED |
|---|---|
| ● Only 70 to 75 percent of eligible voters are registered, yet voter rolls are artificially inflated with as many as one in four invalid entries—fueling concerns that fraud will affect the voting process. | ▶ Up to 85 percent of eligible voters are registered, with states using a wider array of data sources to create leaner, more accurate lists and far fewer opportunities for fraud. |
| ● Voter registration relies primarily on manual data entry of handwritten paper forms, costing states hundreds of millions of dollars annually to update and maintain voter rolls. | ▶ Voter registration relies on modern, proven technology—including user-friendly online portals—to update and maintain voter lists, resulting in substantial cost savings for election offices and taxpayers alike. |
| ● The registration process creates unnecessary distance between eligible citizens and the voter rolls and emphasizes the role of third-party groups, which often deposit huge numbers of registrations on election offices at the deadline, making it difficult to process them in time. | ▶ A modernized registration system empowers eligible citizens to directly manage their own voter records, de-emphasizing third-party groups and reducing the need for states to process a wave of last-minute updates and changes to the rolls. |
| ● Voter registration lawsuits are pervasive; at the same time, inaccurate data, unregulated third-party registrations and outmoded processing efforts can lead to voters experiencing problems or becoming disenfranchised. | ▶ Voter registration lawsuits are substantially reduced, because more accurate data and automated processing lead to better lists, and a failsafe option protects voters in the unlikely event of inaccurate data. |
| ● Official state voter rolls are controlled and maintained by state and county election officials. | ▶ Official state voter rolls are *still* controlled and maintained by state and county election officials. |

# Conclusion

Voter registration is the gateway to our nation's election system. Unfortunately, as America has become more mobile—and our technology more sophisticated—voter registration has failed to keep pace. As a result, election officials and voters alike are forced to rely on antiquated and cumbersome procedures that create an inaccurate, inefficient and unnecessarily costly system.

Individual citizens pay the price, not just as voters who might not be able to cast a ballot or who are concerned about fraud, but also as taxpayers who continue to pay for an outdated system. Americans deserve a more cost-effective, accurate and efficient system that protects the integrity of the registration process and ensures that only eligible voters are on the rolls.

This report demonstrates that with a few simple changes, states can modernize voter registration in a way they can adapt to their own needs. States could phase out many laborious and error-prone procedures and considerably increase the level of accuracy, integrity and service that the voter registration system offers to voters by: 1) significantly expanding the sources of data against which they compare registration records; 2) using proven matching techniques to attain the desired level of data integrity and accuracy; and 3) creating new means for voters to access and update their own records. Even better, such improvements need not be implemented in every jurisdiction to reap the benefits.

We hope the ideas presented in this report initiate substantive discussions about modernizing the registration process among the public, policy makers and election officials. During the next few years, Pew will partner with individual states to test which technologies and procedures work best for them and which might work for other states. We will share the results of those projects as we move forward.

# Endnotes

1 Stephen R. Ansolabehere, Michael Alvarez, Adam Berinsky, Gabriel Lenz, Charles Stewart III, and Thad Hall, *2008 Survey of the Performance of American Elections: Final Report* (Pasadena, CA: California Institute of Technology/Massachusetts Institute of Technology Voting Technology Project, March 2009), 59; www.vote.caltech.edu/drupal/node/231.

2 Matt Barreto, Bonnie Glaser and Karin MacDonald, *Online Voter Registration (OLVR) Systems in Arizona and Washington: Evaluating Public Usage, Public Confidence and Implementation Processes* (Washington, DC: Pew Center on the States, April 1, 2010), 93.

3 Pew Center on the States e-mail correspondence with Elaine Manlove, commissioner of elections, Delaware Department of Elections, February 26, 2010.

4 In 2008, the U.S. Bureau of the Census found that 11.9 percent of Americans, or 35.2 million people—roughly every eighth American—moved. *See* "Residential Mover Rate in U.S. Is Lowest since Census Bureau Began Tracking in 1948," press release (Washington, DC: U.S. Bureau of the Census, April 22, 2009); http://www.census.gov/newsroom/releases/archives/mobility_of_the_population/cb09-62.html. In 2007, 38.7 million people moved. The 2008 figure was low due to a recession; it typically hovers around 15 percent. *See also* "Annual Geographic Mobility Rates, by Type of Movement: 1947–2008," U.S. Bureau of the Census; http://www.census.gov/population/socdemo/migration/tab-a-1.pdf.

5 Hope Yen, "Census: Share of Americans on the Move Edging Up," *Associated Press*, May 10, 2010.

6 Harvard Lomax, "Inactivation of Voters in Clark County," *Memorandum–Election Department*, Nevada Secretary of State, March 12, 2010; and Pew Center on the States conversation with Harvard Lomax, registrar of Clark County, Nevada, during *Voter Registration Modernization: First Steps Toward Modernization*, a meeting hosted by the Pew Center on the States, April 30, 2010.

7 Michael Falcone and Michael Moss, "Group's Tally of New Voters Was Vastly Overstated," *The New York Times*, October 23, 2008; http://www.nytimes.com/2008/10/24/us/politics/24acorn.html. Additionally, Rock the Vote said it helped 2.6 million people to register via its "online tool, grassroots efforts and direct mail" efforts in 2008. *See also* http://www.rockthevote.com/about/rock-the-vote-2008-program/.

8 Stephen R. Ansolabehere, David Doherty, Alan Gerber, and Eitan Hersh, *Voter Registration List Quality Pilot Studies: Report on Detailed Results* (Washington, DC: Pew Center on the States, June 8, 2010).

9 *Cooperative Congressional Election Study* (Washington, DC: Pew Charitable Trusts Content, 2008).

10 Ansolabehere, Doherty, Gerber, and Hersh, *Voter Registration List Quality Pilot Studies*, Table 4, 12.

11 *Description of the National Register of Electors* (Ottawa, Ontario: Elections Canada, February 2005); http://www.elections.ca/content.asp?section=ins&document=national&dir=nre&lang=e&textonly=false.

12 Ansolabehere, et al., 2008 *Survey of the Performance of American Elections: Final Report*, 59.

13 Stephen R. Ansolabehere, "Voting Experiences," PowerPoint presentation, July 30, 2009. This presentation elaborated on findings published in the *Cooperative Congressional Election Study* (Cambridge, MA: Common Content, Release 1, 2009).

14 "Provisional Ballots: An Imperfect Solution" (Washington, DC: Pew Center on the States, July 2009); http://www.pewcenteronthestates.org/ initiatives_detail.aspx?initiativeID=54789.

15 *Cooperative Congressional Election Study* (Cambridge, MA: Common Content, Release 1, 2009).

16 *Cooperative Congressional Election Study* (Washington, DC: Pew Charitable Trusts Content, 2008).

17 Ethan Roeder, *Voter Registration Analysis '08* (Washington, DC: New Organizing Institute, December 14, 2009).

18 "Maintenance of State Voter Registration Databases: A Review of Relevant Policies and Procedures" (Washington, DC: National Association of Secretaries of State, September 2009), 4–11; http://nass. org/index.php?option=com_docman&task=doc_ download&gid=792.

19 Caltech/MIT Voting Technology Project, *Voting: What Is, What Could Be*, July 1, 2001, 51; http://www. vote.caltech.edu/drupal/node/10.

20 Testimony of Jonah H. Goldman, executive director, National Campaign for Fair Elections, Lawyers' Committee for Civil Rights Under the Law, before the Senate Committee on Rules and Administration, March 11, 2009.

21 *The Real Cost of Voter Registration: An Oregon Case Study* (Washington, DC: Pew Center on the States, March 2010); http://www.pewcenteronthestates.org/ report_detail.aspx?id=56478.

22 Elizabeth Williamson and Brody Mullins, "Democratic Ally Mobilizes in Housing Crunch," *The Wall Street Journal*, July 31, 2008; http://online.wsj. com/article/SB121745181676698197.html.

23 Barreto, Glaser, and MacDonald, *Online Voter Registration (OLVR) Systems in Arizona and Washington*, 93. In fact, approximately 90 percent of all online registrations cost nothing to process, due to an absolute match with data in the motor vehicles database. The other 10 percent required some follow-

up, which cost on average 33 cents per form, leading to an average cost of 3 cents for all online registrations.

24 Pew Center on the States e-mail correspondence with Elaine Manlove, commissioner of elections, Delaware Department of Elections, February 26, 2010. In Delaware's proposed 2011 budget, the Department of Elections eliminated five vacant positions, saving $200,000. In its proposed budget, the Delaware Division of Motor Vehicles estimates an additional $100,000 in budget reductions taken during the next two years thanks to the eSignature program.

25 Comment by Brad Bryant, state election director, Kansas Secretary of State office, during discussion with Pew Center on the States "Voter Registration Modernization Design Working Group," November 19–20, 2009.

26 For more information, *see*: "Maintenance of State Voter Registration Databases: A Review of Relevant Policies and Procedures" (Washington, DC: National Association of Secretaries of State, September 2009), 10–11. In 2005, the Midwest Election Officials Conference—composed of Iowa, Kansas, Nebraska and Missouri—signed an agreement to share voter registration information. Minnesota and South Dakota joined this effort, via a legal memorandum of understanding, but they are not conference members. A second interstate consortium of states from the central southern portion of the United States was created to share registration information, and the consortium performed its first comparisons in 2009. That group now includes Arkansas, Kentucky, Missouri, Iowa, Nebraska, Oklahoma, Colorado, Arizona, South Dakota, Tennessee, Mississippi and Louisiana (Kansas is a member of both groups.). Kentucky, Tennessee and South Carolina have shared voter registration data among the three states, and Washington and Oregon began a sharing effort by comparing voter lists for border counties. The agreement between Washington and Oregon was analyzed in detail in: R. Michael Alvarez, Jeff Jonas, William E. Winkler and Rebecca N. Wright, *Interstate Voter Registration Database Matching: The Oregon-Washington 2008 Pilot Project*, June 30, 2010; http:// www.vote.caltech.edu/drupal/node/289.

27 R. Michael Alvarez, Jeff Jonas, William E. Winkler and Rebecca N. Wright, *Interstate Voter Registration Database Matching: The Oregon-Washington 2008 Pilot Project*, June 30, 2010; http://www.vote.caltech.edu/drupal/node/289.

28 Ibid.

29 Ibid.

30 Rennie Molnar, "Operational Aspects of Canada's National Register of Electors," PowerPoint presentation given at *Voter Registration Modernization: A Case Study of the Canadian Systems of Voter Registration*, a meeting hosted by the Pew Center on the States in cooperation with the International Foundation for Electoral Systems (IFES), Toronto, Canada, June 4–5, 2009. More than $100 million is derived from converting $150 million Canadian dollars using http://fx.sauder.ubc.ca/etc/CADpages.pdf.

31 Jean Pierre Kingsley and Gabrielle Bardall, *Voter Registration Modernization: A Case Study of the Canadian National Register of Electors* (Washington DC: IFES, June 2009), 4. $9.75 million is derived from converting $13.3 Canadian dollars using http://fx.sauder.ubc.ca/etc/CADpages.pdf.

32 Molnar, "Operational Aspects of Canada's National Register of Electors," PowerPoint presentation given at *Voter Registration Modernization: A Case Study of the Canadian Systems of Voter Registration*, Toronto, Canada, June 4–5, 2009.

33 Ibid; Pew Center on the States e-mail correspondence with Rennie Molnar, associate deputy director chief electoral officer, Elections Canada, December 3, 2009.

34 Barreto, Glaser, and MacDonald, *Online Voter Registration (OLVR) Systems in Arizona and Washington*, 75.

35 Those states are California, Colorado, Indiana, Kansas, Louisiana, Oregon and Utah.

36 Pew Center on the States e-mail correspondence with Elaine Manlove, commissioner of elections, Delaware Department of Elections, November 25, 2009.

37 "Maintenance of State Voter Registration Databases: A Review of Relevant Policies and Procedures," (Washington, DC: National Association of Secretaries of State, September 2009), 10–11. *See also* R. Michael Alvarez, Jeff Jonas, William E. Winkler and Rebecca N. Wright, *Interstate Voter Registration Database Matching: The Oregon-Washington 2008 Pilot Project*, June 30, 2010; http://www.vote.caltech.edu/drupal/node/289.

38 "Maintenance of State Voter Registration Databases," National Association of Secretaries of State, 2009, 12.

39 Ibid, 6.

40 Ibid, 10–11.

41 Ian Urbina, "States' Actions To Block Voters Appear Illegal," *The New York Times*, October 8, 2008; http://www.nytimes.com/2008/10/09/us/politics/09voting.html. Federal lists are less accurate than state lists and, under federal law, are to be used as a last resort. Several states appear to have been using the federal data first.

42 Adam Liptak and Ian Urbina, "Justices Block Effort to Challenge Ohio Voters," *The New York Times*, October 17, 2008; http://www.nytimes.com/2008/10/18/washington/18scotus.html.

43 *Improving State Voter Registration Databases: Final Report* (Washington, DC: National Research Council of the National Academies, 2009) 45; http://books.nap.edu/openbook.php?record_id=12788&page=R1. In short, the National Academies concluded that HAVA matching did not use enough data sources, or strong enough matching criteria, to accurately assess voter registration information.

44 For an example in the gaming community, *see*: Jeff Jonas, chief scientist of the IBM Entity Analytics Group and an IBM Distinguished Engineer, IBM; http://jeffjonas.typepad.com/IEEE.Identity.Resolution.pdf.

45 Jeff Jonas, "How to Use a Glue Gun to Catch a Liar," July 10, 2007; http://jeffjonas.typepad.com/jeff_jonas/2007/07/how-to-use-a-gl.html. *See also* Jeff Jonas, "It Turns Out Both Bad Data and a Teaspoon of Dirt May Be Good For You," December 29, 2006; http://jeffjonas.typepad.com/jeff_jonas/2006/12/it_turns_out_bo.html.

46 Don Clark, "Entrepreneur Offers Solution for Security-Privacy Clash," *The Wall Street Journal*, March 11, 2004; http://webreprints.djreprints. com/946631285938.html.

47 "Risk Management Principles for Electronic Banking," Basel Committee on Banking Supervision, Bank for International Settlements, July 2003; http://www.bis.org/publ/bcbs98.pdf.

48 For instance, it could inform election officials that a Social Security number or driver's license matched and could provide the source of the matching data without revealing the actual numbers.

49 Barreto, Glaser, and MacDonald, *Online Voter Registration (OLVR) Systems in Arizona and Washington* (Washington, DC: Pew Center on the States, April 1, 2010).

50 Pew Center on the States e-mail correspondence with Scott J. Wiedmann, deputy director, Federal Voting Assistance Program (FVAP), October 14, 2009. Fourteen states do not require registration for UOCAVA and overseas military voters: Arizona, Arkansas, Illinois, Kansas, Maine, Massachusetts, Minnesota, Missouri, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island and Utah. Wisconsin does not require registration only for overseas military voters. And four states require registration, but allow applications to be received through Election Day for UOCAVA and overseas military voters: Iowa, Michigan, Montana and Washington.

# Voter Registration Modernization Design Working Group

The Pew Center on the States is grateful to all of the listed individuals who contributed to the discussions that informed this report. We were very fortunate to draw upon the knowledge and expertise of this dynamic group of state and local elections officials, scholars and technical specialists.

*The views expressed in this report reflect the recommendations of the Pew Center on the States, and do not necessarily reflect the opinions of any particular individual or their office, or any particular county or state.*

| Name | Title | Office/Organization | State |
|---|---|---|---|
| LuAnn Adams | County Recorder/Clerk | Box Elder County | UT |
| R. Michael Alvarez | Professor | California Institute of Technology | CA |
| Stephen Ansolabehere | Professor | Harvard University | MA |
| Brad Bryant | State Election Director | Kansas Secretary of State | KA |
| Judd Choate | State Election Director | Colorado Secretary of State | CO |
| Mike Cragun | Deputy Chief of Staff | Utah Lieutenant Governor | UT |
| John Cramer | Chief of Staff | Alaska Lieutenant Governor | AK |
| Matt Damschroder | Deputy Director | Franklin County Board of Elections | OH |
| Neal Erickson | Deputy Secretary of State | Nebraska Secretary of State | NE |
| Dave Franks | OCVR/HAVA Manager | Oregon Secretary of State | OR |
| Matthew Griffin | Deputy for Elections | Nevada Secretary of State | NV |
| Thad Hall | Associate Professor | University of Utah | UT |
| Nick Handy | Director of Elections | Washington Secretary of State | WA |
| Ryan High | HAVA Administrator | Nevada Secretary of State | NV |
| Ben Hovland | Deputy General Counsel | Missouri Secretary of State | MS |
| Sarah Ball Johnson | Executive Director | Kentucky State Board of Elections | KY |
| Jeff Jonas | Distinguished Engineer & Chief Scientist EAS | IBM | NV |
| Neal Kelley | Registrar of Voters | Orange County | CA |
| Kevin Kennedy | Director and General Counsel | Government Accountability Board | WI |

*(continues)*

## Voter Registration Modernization Design Working Group *(continued)*

| Name | Title | Office/Organization | State |
|------|-------|---------------------|-------|
| Lisa Kimmet | Deputy for Elections | Montana Secretary of State | MT |
| Nicole Lamboley | Chief Deputy | Nevada Secretary of State | NV |
| Dean Logan | Registrar-Recorder/County Clerk | Los Angeles County | CA |
| Larry Lomax | Registrar | Clark County | NV |
| Elaine Manlove | State Election Commissioner | Division of Elections | DE |
| Christopher Mann | Assistant Professor | University of Miami | FL |
| Bruce McDonnold | VoteCal Elections Lead | California Secretary of State | CA |
| Ann McGeehan | Director of Elections | Texas Secretary of State | TX |
| Toby Moore | Project Director | Research Triangle Institute | DC |
| Wayne Munster | Deputy Director of Elections | Colorado Secretary of State | CO |
| Paul Neuenschwander | Chief of Staff | Utah Lieutenant Governor | UT |
| Peggy Nighswonger | State Election Director | Wyoming Secretary of State | WY |
| Barry Pack | Deputy Secretary of State | Oregon Secretary of State | OR |
| Gary Poser | Director of Elections | Minnesota Secretary of State | MN |
| Trevor Potter | President and General Counsel | Campaign Legal Center | DC |
| Steven Rosenfeld | Researcher/Writer | Consultant to Pew Center on the States | CA |
| Hilary Rudy | Legal Analyst | Colorado Secretary of State | CO |
| Gary Smith | Chairman, Board of Registrations & Elections | Forsyth County | GA |
| John Smith | Deputy Secretary of State | Maine Secretary of State | ME |
| Christopher Thomas | Elections Director | Michigan Secretary of State | MI |
| Mark Thomas | Office Administrator | Utah Lieutenant Governor | UT |
| Carol Thompson | Absentee and Petition Manager | Division of Elections | AK |
| Kimberley Wyman | County Auditor | Thurston County | WA |

THE PEW
CENTER ON THE STATES