The 2000 Election debacle led to the creation of the Help America Vote Act (HAVA). This article discusses whether the promise of HAVA, to modernize American elections, has been met, and reviews the current trends and innovations happening in elections across the country. The emerging technologies are making this an exciting time, but elections remain a people-driven and people-serving process, and we need to continue to encourage people to get involved as election specialists and poll workers.

Fifteen years ago, America was still reeling from the events of the 2000 presidential election: butterfly ballots, punch cards, hand recounts, magnifying glasses, hanging chads, fat chads, dimpled chads, pregnant chads, undervotes, overvotes, court battles — it was a national mess. A year later, in 2002, it resulted in Congress passing the Help America Vote Act, or HAVA, in an effort to improve voting processes and modernize election administration. HAVA came with billions of dollars, which many states used to purchase new voting systems. HAVA also created the U.S. Election Assistance Commission, or EAC, and established minimum standards for states and units of local government responsible for administering federal elections. Has it made a difference? Are U.S. elections actually any better?

The answers to these questions are yes and yes. While some immediate actions taken post-HAVA were perhaps premature, for example, the purchase of new voting systems prior to the development of the Federal Voluntary Voting Systems Guidelines, or VVSG, overall we’ve seen great strides. Almost all states have computerized statewide voter registration lists, the vast majority of punch card and lever machines have been replaced, voting systems allow voters to correct errors and have audit capabilities, no voter is automatically turned away from the polls and may fill out a provisional ballot, and the EAC is, after some years in the wilderness, back to assisting the states in improving the conduct of elections. But has the promise of HAVA been fulfilled? Are America’s elections modernized?
To those questions, the answers are, unfortunately, no and no. While some progress has been made, voting systems are still not fully accessible for individuals with disabilities, in that they do not provide the same opportunity for access and participation as for other voters. Military and overseas citizens continue to be disenfranchised at a high rate because of logistical problems in transmitting ballots. States and the EAC have robust voting system testing and certification programs, but huge leaps in technology have occurred and the definition of what constitutes a voting system is rapidly changing. Most systems are tested under guidelines that were enacted in 2005, two years before the first Apple iPhone was released. After complaints of long lines in 2012, President Barack Obama formed the Presidential Commission on Election Administration, PCEA, which among other things reported that there is an impending crisis in voting technology.”¹ Many of the voting systems being used right now are at the end of their life cycles and no more federal money will be coming to buy the next round of machines. Voter registration and list maintenance look quite different, certainly since the National Voter Registration Act, or NVRA, was passed in 1993, but also since the passage of HAVA. Paper registration forms are getting close to being passé, and in some places, registration by the voter is going away. Bad data from motor vehicle agencies continues to be a problem. Expectations of voters have changed over the past 14 years. They expect to vote like they live the rest of their lives; they demand that the voting experience be customer-oriented (more like Amazon and Zappos), efficient, convenient and fast. And much more work has to be done to guarantee privacy and security before online voting becomes acceptable: one of the questions election officials hear most is, “When will I be able to vote on my phone?”

The good news is that interest in election administration issues has not waned since 2000. And, the phrase that Justice Louis Brandeis popularized in 1932, that a “state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country,”² is still true in the elections arena. Innovation is happening across the country and much is changing quickly, and partnerships between the states and the federal election assistance agencies are helping to spread the best ideas. It is an interesting time in the history of voting and elections.

**Voting Systems Developments**

Election administrators across the country saddled with old or “legacy” voting systems are working hard to sustain and maintain their machines and are taking whatever steps necessary to prevent a crisis while they wait for the opportunity to purchase new systems.³ Fourteen years is a long lifespan for a computer; most people have replaced their personal computers several times in that time period. Some jurisdictions are purchasing new systems now; some are waiting on funding to replace systems, while others want to see what options will soon be in the market.

When the 2005 VVSG was enacted, voting systems were stand-alone machines that captured and tabulated votes, but with emerging technology, the lines of what constitutes a voting system are blurring. Los Angeles County, Calif., and Travis County, Texas, are developing their own voting systems, and while they have each approached the issue in their own way (Los Angeles County concentrating on the “voter experience” and Travis County on “vote verification”), both counties are helping to drive the conversation and development of innovative solutions in voting technology. Both those jurisdictions and many others are investing in commercial off-the-shelf, or COTS, technology as part of their voting systems. Elections administrators want to be able to add or subtract components as they need them. While the central voting and tabulating machine is still at the center of the traditional voting system, innovation is happening around that system by leaps and bounds.

Some states are employing election technology committees to explore options in voting technology.⁴ Colorado’s committee recently evaluated a number of voting systems piloted in several counties that allowed Colorado Secretary of State Wayne Williams to select a new system to replace its current patchwork of voting systems.⁵ The selected system integrates a commercially available tablet, commercially available printer and uses regular paper. Other trends in this area include ballot-on-demand (allowing timely access to any ballot style for a given election) and ballot-marking devices (allowing components such that a voter can direct the marking of a paper ballot, have the system interpret and communicate the selections back to the voter, and print a ballot for the voter to review and verify). While there is still a long way to go, there have been significant developments in assistive technology, including large visual display, voice input selection, improved audio options, tactile input devices
and, importantly, use of the voter’s own assistive technology. Prime III, an open-source, software-based assistive technology with a multimodal user interface was rolled out in New Hampshire under the name One4all for the 2016 primary.

Funding new voting technology is a hot topic of discussion. Some jurisdictions, like Maryland, are leasing their equipment. Others are budgeting over time or making capital appropriation requests. Open-source software is a potential cost-saving consideration, as are non-dedicated use of COTS products and equipment sharing between jurisdictions. Without new federal funding, election administrators are putting on their creative funding hats and investigating all available options.

The EAC is providing assistance to election administrators to manage election technology. It has recently published new guides on selecting a new voting system, managing aging voting systems and considerations for implementing voting systems with COTS products. The EAC also is collecting and posting requests for proposals, or RFPs, and information on e-pollbooks, so those who are in the process of purchasing new technology can see what other jurisdictions have done. In an effort to save states time and money and create efficiencies, the EAC is continuing to map state certification requirements to the federal VVSG. Last year the EAC enacted an update to the 2005 guidelines, VVSG 1.1, along with some program and laboratory manuals, opening up the standards to innovation. A long overdue new iteration of the VVSG is already underway, but it will be a challenge to craft new standards that adhere to the scope of HAVA (which was formulated before the surge in technology) continue to encourage and not deter innovation, and support ideas such as a common data format to integrate voting system components.

Pre-Election Trends
Online voter registration, or OVR, a bipartisan effort, is the hottest new development in elections. Currently, at least 30 states use OVR and at least five more are considering it in 2016. Because elections officials can process online registrations in a matter of seconds, time and cost savings are a huge benefit. Errors are reduced and cleaner voting rolls result, as the voter is entering his or her most up-to-date information. Applicants find it easy because they can do it online, perhaps even on their phones, so it matches their lifestyle. Everyone wins with this trend.

Automatic voter registration, or AVR, is another development so far implemented only in Oregon. AVR is a process by which a state, utilizing data collected on its residents from DMVs or other agencies, registers persons without requiring an application. Subsequently, the state mails a notice that requires persons to opt out within a short period of time, and unless a person affirmatively declines, he or she is permanently registered. California has passed AVR legislation, but it will not fully go into effect until the state completes its statewide voter registration system. In New Jersey, a bill including AVR was vetoed by Gov. Chris Christie in late 2015. AVR legislation has been proposed in a number of mostly “blue” states, and does not appear to be a bipartisan effort or based on any particular data. Whether AVR is successful and withstands scrutiny is yet to be seen.

Early voting is another trend across the nation. More than two-thirds of states allow voters to cast a ballot before Election Day without an excuse or justification, and of those that do allow it, periods range from four to 45 days. Thirteen states only allow absentee voting if the voter can provide an acceptable excuse.

Of course, every state is required to mail ballots to military and overseas citizens at least 45 days before an election according to the Uniformed and Overseas Citizens Absentee Voting Act, known as UOCAVA, and the Military and Overseas Voter Empowerment, or MOVE, Act. While online voting is still quite problematic, electronic ballot transmission for these voters (and some others) is already occurring. Several states have introduced legislation to allow it and some are conducting pilots. Alaska allows it for all voters and Hawaii is considering the same. Currently five states allow some or all ballot transmission through an online website; 22 (including Washington, D.C.) allow
ballots to be transmitted by email or facsimile, six allow by facsimile, and 18 allow transmittal only by mail.

Another pre-Election Day trend is the growth of interstate data matching for list maintenance and integrity purposes. The two interstate data matching programs, the Electronic Registration Information Center, or ERIC,12 and the Interstate Voter Registration Crosscheck Program, known as Crosscheck, are not identical, but both allow participating states to share voter registration and voter history data, upload that information to a database and compare states’ data, match records, and report back so states can take action. Fifteen states are members of ERIC, 30 states utilize Crosscheck and six states are members of both programs.

| **Table A: Ballot Transmission Methods** |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| **Online Website** | **Email/Facsimile** | **Facsimile** | **Mail only** |
| Alabama | Colorado | California | Arkansas |
| Alaska | Delaware | Florida | Connecticut |
| Arizona | Idaho | Hawaii | Georgia |
| Missouri | Indiana | Louisiana | Illinois |
| North Dakota | Iowa | Rhode Island | Kentucky |
| | Kansas | Texas | Maryland |
| | Maine | Oregon | Michigan |
| | Massachusetts | South Carolina | Minnesota |
| | Mississippi | Utah | New Hampshire |
| | Montana | Washington | New York |
| | Nebraska | Washington, DC | Ohio |
| | Nevada | | Pennsylvania |
| | New Jersey | | South Dakota |
| | New Mexico | | Tennessee |
| | North Carolina | | Vermont |
| | Oklahoma | | Virginia |
| | | | Wisconsin |
| | | | Wyoming |

**Election Day Trends**

The use of electronic or e-pollbooks tops the trends for Election Day. Traditionally, checking into a polling place required a voter to approach an election official who would look up the voter’s name and address in a paper poll book before issuing a ballot. That process often caused bottlenecks and lines at polling places. E-pollbooks, which consist of a laptop or tablet fitted with a card swiper, use driver’s licenses to quickly pull up a voter’s information and allows the sign-in process to be completed electronically. The e-pollbook verifies whether the voter is eligible and in his or her precinct, and if not, will provide the voter’s correct polling location. Some e-pollbooks will even produce a map with directions. E-pollbooks can also show whether a voter has already voted and, if networked, can provide real-time updates on whether the voter has voted at another location.

Three states are now utilizing mail-in ballots for all of their voters: Colorado, Oregon and Washington. Voters are automatically mailed a ballot to the address on the voter registration list. Voters may return the ballot by mail or use an official ballot drop-off location, which are available 24 hours a day and monitored by camera. Ballots delivered to the elections office are sent through a machine that removes a flap from the return envelope to reveal the voter’s signature. Signatures are scanned and electronically sent to signature verification teams who compare them to other signatures of the voter on file in order to verify authenticity before the ballot envelope is opened and the ballot is counted. States using mail-in ballots have seen some increases in turnout.
Another growing trend is the use of vote centers, which permit a voter to cast a ballot outside of a traditional precinct/polling place. A number of states have passed legislation to permit the use of vote centers as these centers may reduce cost as well as increase convenience for voters. Some have authorized pilot programs (for example, San Diego, Calif.), to determine whether a larger rollout is warranted. Colorado is utilizing vote centers for those voters who don’t want to vote by mail but still want to vote in person. Vote centers may reduce costs as well as increase convenience for voters. A downside is the loss of traditional civic interaction and possible voter confusion without a robust voter education program.

Same-day voter registration is also on the rise. It allows a voter to show up at a polling location, provide proof of residency and some form of acceptable ID, and then proceed to cast a ballot. Thirteen states and territories have same-day registration: Colorado, Connecticut, Idaho, Illinois, Iowa, Maine, Minnesota, Montana, New Hampshire, Vermont, Wisconsin, Wyoming and Washington D.C. California has passed legislation allowing for same-day registration, which will take effect once the state has a functioning statewide voter registration database, and Hawaii will implement it in 2018.

Voters are now also able to use a variety of apps to facilitate the voting process. Various apps furnish voters with their polling location, compare candidates and tell the voter what is on the ballot, get results, and even track ballots so the voter knows exactly where his or her ballot is at all times. An app to track wait times is also under construction.

Voter ID is also trending upward. Thirty-three states have some form of voter identification in place this year, while three states have seen their voter ID laws struck down: Arkansas, Missouri and Pennsylvania. In 2015, a federal court decided that part of Texas’ voter ID law is unenforceable, but it appears ID will still be required to vote. North Carolina’s law is still in litigation and the outcome is uncertain. States are also starting to consider biometric identification, which could be an interesting development.

**Post-Election Day Trends**

Post-Election Day developments include audits, election night reporting and ballot adjudication. More than half of states require post-election audits. Last year, Connecticut and New York authorized automatic audits. Some states also are considering risk-limiting audits, which use statistical evidence to determine whether a reported outcome, rather than the tabulation, is accurate. If the outcome is questionable, a hand recount may be required to correct a possibly incorrect outcome.

Election night reporting software has improved and now allows jurisdictions to use electronic interfaces to provide real-time updates and reports in graphic formats. Interactive maps immediately illustrate voter turnout, voting trends, vote totals by type, and individual polling place results. Web-based applications let jurisdictions display results automatically for the media outlets, candidates and the public.

The ballot adjudication process also is changing due to emerging technology. Traditionally, marked ballots are scanned through high-speed ballot scanners to read the voter’s marks and pass the results to a tabulation computer. If the scanner rejects an unreadable ballot, it must be manually reviewed, usually by a bipartisan team. If the team determines that the ballot is capable of adjudication, the ballot is examined to determine a voter’s intent and a duplicate is created by hand marking a blank ballot so it can be scanned and counted. Ballots often have stray marks, contain over/under votes, and sometimes the intent of the voter is unclear by the way the voter marks the ballot (for example, by circling the candidate’s name and writing it in). Just touching a ballot can create additional marks or tears, so the rejected ballots need to be handled carefully. Some jurisdictions, such as Denver, Colo., are using technology that allows the rejected ballot to be digitally scanned or photographed, allowing an adjudication team to bring a rejected ballot up on a screen, zoom in, identify the cause of the rejection and fix discrepancies to reflect the voter’s intent without even touching a ballot. The adjudication team can digitally duplicate the ballot so that it can be scanned and tabulated and a log of the team’s
decisions remains attached to the ballot in case of further questions. Digital adjudication speeds up the process, creates a trackable record and better preserves the original ballot in case it is needed for comparison.

**A Call to Action**

There is much more innovation happening than can be outlined here. Elections are getting better and are well on their way to meeting the promise of HAVA and being the up-to-date modern elections that voters expect. The changes occurring in the various states and jurisdictions are being shared and duplicated throughout the nation. The emerging technologies are making this an exciting time in elections.

Still, elections remain a people-driven and people-serving process. There is an urgent need for an elections workforce. We need to continue to encourage people to get involved as election specialists and poll workers. Even with all the new and emerging technology, voting can only happen if we have trained personnel to work at the polls, bilingual speakers to help minority language speakers, truck drivers to deliver equipment or pick up ballots from drop-boxes, warehouse crews to manage storage, IT experts to test and maintain voting equipment and systems, and staff to serve at election offices and on adjudication teams. Technology is great and it is helping us improve elections, but our focus still needs to remain on people and the voters, which is what elections are all about.

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**Notes**

4. For example, see Nebraska One Hundred Fourth Legislature, Second Session, Legislative Resolution 403 [6] (January 12, 2016), accessed on February 18, 2016.
6. Ganley, Rick, and Brindley, Michael, “Tablet-Based Ballot for Blind Voters to Debut During N.H. Primary” [9],” NHPR (February 8, 2016), accessed on February 18, 2016.
11 Id.
12. The Electronic Registration Information Center, homepage [14], accessed on February 18, 2106.
14. Think Voting [16], accessed on February 18, 2016. MODERN ELECTIONS The Council of State Governments 285
15. My Vote [17], accessed on February 18, 2016; see also, Interknowlgy [18], accessed on February 18, 2016.

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