Internet Voting: Creeping Our Way?

"Internet voting" means different things to different people. To many folks, it might mean "click a button, submit, done." To some—and for our purposes—it means anytime a voted ballot is transmitted in any way, shape or form via the Internet.

Whatever the definition, computer scientists tell us that secure online voting is still many years, or even decades, away. For now, they say, using the Internet to return voted ballots can’t be done with confidence (see the column on the right below).

Like it or not, Internet voting is on the minds of legislators and other policymakers. We say that, based on the 13 states that have had legislation in 2015 that deals in some way with permitting Internet voting. Only one has been enacted, Maine SB 552 (see the column on the left below).

So voters’ needs and technical expectations may push policymakers toward Internet voting—and at the same time security concerns are holding it back.

What’s Pushing Internet Voting?

Every teen says “What do you mean, I can’t vote on my phone?” Besides that sentiment, several trends make using the Internet to facilitate voting attractive. Merle King, executive director of Kennesaw State University’s Center for Election Systems, is not a proponent for Internet voting—but he is a realist. He notes the importance of identifying these trends so that a jurisdiction doesn’t suddenly find itself in the online voting business, on short notice, without a plan.

- **Voter expectations.** Citizens are increasingly demanding that government services be available online. According to the Pew Research Center, 84 percent of American adults use the Internet and this number jumps to 96 percent among 18- to 29-year-olds. It is

What Are the Risks with Internet Voting?

If you talk to security experts about the possibility of safely voting online, they will almost universally tell you that it’s not possible—at least not yet. J. Alex Halderman, a computer scientist from the University of Michigan, notes that “The risks of Internet voting are extremely severe. We will need to make fundamental progress in Internet security before it can be done securely.” Based on NCSL’s conversations with Halderman and others, below is a list of the many ways an online voting system could be compromised. If used on a large scale, such a system could provide a particularly attractive target for nefarious actors both inside and outside the United States.

- **Malware.** One danger is a direct attack on the computers of election officials or voters, or

(continues on page 2, left column)
only a matter of time before voters ask to exercise their right to vote over the Internet.

**Convenience voting.** An ever-growing number of states now allow early voting, no-excuse absentee voting or all-mail voting. In the minds of voters, the next logical step in the name of convenience may be to vote in their pajamas from a home computer or a mobile device.

**Cost.** As states face the necessity of replacing aging voting machines, the prospect of a "cheaper" method of voting can be appealing. Much like vote-by-mail options, Internet voting could reduce the need for polling places, staff and equipment—some of the most expensive budget lines for election officials.

Cost was one of the drivers for Utah’s iVote Advisory Committee, which explored the challenges, security, privacy, cost and feasibility of allowing voters to cast ballots online. The committee consisted of legislators, academics, security experts and local election officials.

A member of the committee, former Representative Jon Cox, notes: “In the state of Utah we’re coming up at the end of the lifecycle of our election equipment. It’s an estimated $29 million expense to replace that. As we’re coming up on that decision, the thought is we’re either going to have to come up with $29 million, or find other options that may cost up front but be more cost effective in the long run.”

Simply adding online voting to the menu of options for voters may not save as much money as might be expected, though. And, the cost for having a truly secure system is not easy to calculate—just ask Sony, Target or even the federal government, large entities that spend heavily on cybersecurity but have been hacked in recent years.

**Electronic ballot return for military and overseas voters.**

Already, the Internet is being used throughout the country. So far, states have mostly used the Internet to transmit blank ballots to military and overseas (UOCAVA) voters, as required by the 2009 federal MOVE Act. Thirty-one states also allow these voters to return their voted ballots by electronic transmission as well (via fax, email or a web-based system). Some states afford the same privilege to people with disabilities or first responders who are away from their homes. Is it safe to send PDFs of voted ballots online or through an Internet-facilitated fax system? (See “What Are the Risks with Internet Voting?”)

Since 2012, Alaska has permitted any voter (not just military or overseas voters) to use its online ballot delivery and return system, although it does require printing, signing, and

both. Malware is the term for various types of malicious software that infect a computer. Cyber criminals could upload viruses to disable an individual voter’s computer or make the voter think he or she has voted but in fact the ballot never made it to the tally. Reports indicate that nearly one-third of the world’s computers are infected with malware, but that proportion could be much higher.

Hackers these days are very good at concealing malware—it can be undetectable even to those who know how to look for it. What chance, then, do ordinary voters and election officials have? During Washington, D.C.’s 2010 pilot project of an Internet voting system *Halderman and his team* from the University of Michigan were able to hack into the system, view voted ballots, change voted ballots, change passwords, and get access to security cameras within the election office—all without being detected by election officials.

**Botnets.** Home computers are often part of a botnet—thousands or even hundreds of thousands of computers that are infected with malware and remotely controlled. Hackers can get access to these computers through the black market and use them to send spam or steal credit card numbers. The computers potentially could be used for a large-scale attack on an Internet-based voting system. Or they could be used for a denial of service attack—when hackers disrupt the system by overloading it and preventing communications (i.e., voted ballots) from getting through.

**Authentication.** In an unsecured environment such as the Internet, how do you know that the voters who accessed online ballots are who they say they are?

**Verifiability.** Critics of Internet voting and all its variations worry that it is not possible to conduct an audit or a recount of ballots cast online because no paper record exists that can be examined in case of irregularities. If an online bank is hacked and funds are stolen, those funds can be replaced. It’s not possible to replace lost or stolen votes.

Options to make a system that is verifiable at each step of the voting process, known as end-to-end (E2E) verifiable, are in the works but may not be viable for several years.

The U.S. Vote Foundation has released a report on E2E verifiable Internet voting that is a good primer.

**Vulnerability of PDFs.** Many states currently permit military and overseas voters to send their ballots back by attaching a PDF to an email. PDFs are vulnerable to tampering while in transit—so a voter’s choices could potentially be changed between sending and receipt by the election official. Right now the volume of ballots being sent this way is typically too low to change an electoral
witnessing and scanning a voter certificate and identification sheet.

- **Accommodating the needs of people with disabilities.** In 2014, Utah expanded its Internet voting pilot project to allow voters with disabilities to participate along with UOCAVA voters. Maryland has an online ballot marking tool that is available for voters with disabilities, but ballots must be printed and returned by mail.

- **Court rulings.** King points out that someday courts may be asked to rule on the constitutionality of allowing certain citizens, such as those in the military or those with disabilities, greater privileges than others. No such cases exist at this point.

- **Turnout.** The low turnout in recent elections has states looking for any and all options that might increase voter participation—including Internet voting. So far, there is scant evidence that it would increase turnout.

- **Faster release of results.** Anyone who has run for office knows the suspense of waiting for the unofficial results after the polls close. Internet voting could speed up the process.

- **Natural disasters.** In the wake of Hurricane Sandy, New Jersey permitted displaced citizens to submit ballots via electronic transmission, while still requiring that voters follow up by mailing a hard copy of the ballot. The state received praise from groups such as the ACLU and the League of Women Voters for making sure that the state still had access to the polls, but a report from Rutgers University pointed out flaws in the process. This will likely not be the last time that a state faces a natural disaster near Election Day.

- **Declining availability of poll workers.** Election officials often say that the hardest part of their job is recruiting poll workers. So, jurisdictions may want to make every voter a poll worker by embracing Internet voting.

outcome—but if this option is expanded to more and more voters, the risk increases.

- **Opportunities for coercion or intimidation.** A traditional polling place is a controlled environment intended to keep the voting process private. When voting from home on the Internet, it’s possible that a spouse could be coerced into voting a certain way (which is also a worry with mail ballots). At work, many employers reserve the right to monitor Internet access and could potentially see how employees are voting. Estonia, which has permitted its citizens to vote online since 2007, chose to deal with this dilemma by specifying that the last ballot cast would be the final vote recorded. So, if someone is looking over your shoulder while you vote online, you could go back later and cast the ballot again in the way that you actually intended and that second one would be the vote recorded.

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### Helpful Internet Voting Resources

- **NCSL:** Electronic Transmission of Ballots
- **National Institute of Standards and Technology (NIST):** Report on Security Considerations for Remote Electronic UOCAVA Voting
- **Independent Panel on Internet Voting:** Recommendations Report to the Legislative Assembly of British Columbia
- **The U.S. Election Assistance Commission (EAC):** A Survey of Internet Voting
- **Verified Voting Foundation:** Internet Voting
- **The Atlantic Council:** Online Voting: Rewards and Risks
- **U.S. Vote Foundation:** E2E Verifiable Internet Voting Project
- **Halderman et al.:** Attacking the Washington, D.C. Internet Voting System
- **Security Analysis of the Estonian Internet Voting System**
- **The New South Wales iVote System:** Security Failures and Verification Flaws in a Live Online Election

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### One big number

892,202. This is the number of provisional ballots submitted by voters during the 2014 election cycle, according to the U.S. Election Assistance Commission’s Election Administration and Voting Survey Comprehensive Report.

Take a look at the report for more essential data, and be sure to check out NCSL’s new page on provisional ballots. What does federal law say about provisional ballots? Why are they used? How are they processed? What is the legislative role? We’ve got answers to these questions and more for all 50 states. A shout-out goes to NCSL’s Meghan McCann who researched and put together the comprehensive information.
Ask NCSL

What is ballot bundling?
Ballot bundling, sometimes known as ballot harvesting, refers to the practice of permitting people to gather multiple voted absentee ballots from voters and then turn them in all together. Many states allow spouses, family members or other designated agents to turn in a ballot for someone else. For example, in Arkansas an absentee voter can name a designated bearer to return the ballot, with each bearer limited to returning no more than two ballots. But there are states that will allow anyone to collect ballots and turn them in for those who may not be able to or may not want to do it themselves. For instance, in Arizona and in Texas, there are no limits on how many ballots an individual can collect and return, although the Texas Legislature passed a law in 2013 prohibiting individuals from receiving compensation for doing so. Arizona had legislation this year to impose a limit of two ballots. In Colorado, up to 10 ballots can be returned. The same is true in New Jersey, but there the person must be authorized beforehand to do so.

Proof of Citizenship in Legal Limbo

Amidst the flurry of monumental decisions last month in health care, marriage equality and redistricting, a relatively quiet move by the U.S. Supreme Court will have a big impact in two states for sure and maybe others to come. The Court declined to hear Kobach v. United States Election Assistance Commission, in which Kansas was seeking to require a change to the federal voter registration form to include a place for proof-of-citizenship. Kansas has had a proof-of-citizenship requirement when people register to vote on state forms. Arizona joined Kansas in the case. Both states are likely to continue with dual voting systems—one system for those who register using the state form and will be permitted to vote in all elections, and another for those who registered with the federal form and will be permitted to vote in federal elections only. Alabama and Georgia have similar proof-of-citizenship requirements, but these have not been implemented.

That did not stop legislation in other states from being introduced. In 2015 eight bills have been introduced that require proof-of-citizenship when registering to vote, but only one has moved forward—North Dakota passed a bill requiring a study of requiring proof-of-citizenship to vote. Since 2011, 110 bills pertaining to the issue of citizenship have been introduced and not just for those wanting to register to vote. Several bills sought to require state and presidential candidates to provide proof-of-citizenship as a condition of being added to a ballot.

So, how do states verify citizenship? At the very least states require new registrants to affirm, under penalty of perjury, that they are citizens of the United States as required under the Constitution and by the National Voter Registration Act of 1993 for federal voter registration forms.

Arizona, Alabama, Georgia and Kansas statutes require proof-of-citizenship, such as a passport, birth certificate, driver’s license, naturalization documents, or tribal identification at the time of registration. Tennessee statute permits the state to compare voter registration rolls to state and federal lists to see if non-citizens are registered. If potential matches are found, the registrants can be asked for additional proof of citizenship and be removed if citizenship cannot be verified.

Some states, such as Texas, Kansas and Louisiana, use responses from jury duty notices to verify citizenship. For those who indicate on their jury duty notice that they are not citizens, those states will forward the information to local election officials to have them removed from the voter rolls. States are increasingly looking for other ways to keep their voter lists accurate and updated.

Florida and Colorado were notable examples of states that have tried comparing voter registration lists with the Systematic Alienation Verification for Entitlements (SAVE) database, from the Department of Homeland Security, to check citizenship status. The database is not intended as a roster of non-citizens. While the decision not to hear Kobach has halted plans for states to change how they verify citizenship, the debate is far from over. States will continue to be creative in achieving their goals.
From the Chair

Representative Cale Keable is the chairman of the House Judiciary Committee. He has represented District 47 in northwest Rhode Island since 2010. He spoke to *The Canvass* on July 22.

- Generally speaking, as chairman of the Judiciary Committee, I try not to let my personal perspective guide the hearings or the decisions of the committee. Rather, I try to steer the committee towards good, common sense solutions supported by the majority.

- A great majority of the House supported modernizing our voter registration system by permitting online voter registration. Almost everything can be done online these days and it makes sense that you should be able to register to vote online as well—through a safe and secure system. If we reconvene, I hope that we have a chance of passing this legislation or, if not, I look forward to renewing our support next year.

- Our governor just signed another bill that we passed that was a priority of the secretary of state regarding the purchase of voting equipment. This legislation transferred authority to purchase voting machines from the Board of Elections to the secretary of state in the hopes of a comprehensive overhaul of the state’s outdated machines, last updated in 1997.

- This year, we passed additional campaign finance reforms to ensure that elections are open and transparent. With each additional safeguard and measure of accountability, the people can be assured that their right to vote will be respected and their democracy will not be sold to the highest bidder.

Read the full interview with Representative Keable.

The Election Administrator’s Perspective

Jerry Feaser has been the elections and voter registration director for Dauphin County, Pa. since 2013. He is a lifelong resident of the county, which is home to Harrisburg, the state capital. Jerry spoke to *The Canvass* on July 14.

- I know what it’s like being the customer. Customer service is very important to our commissioners. I try to refine instructions and information so that it is easily understandable for voters and so that candidates can work within the law, especially when it comes to campaign finance.

- We’ve enhanced and simplified the materials given to our election workers. We’ve received positive feedback that the new material is easier to navigate, and the workers can quickly find the information they need. Election workers—they really matter.

- In Pennsylvania, online voter registration is an issue being talked about. The Statewide Uniform Registry of Electors (SURE) has helped us reduce typos and errors at an administrative level. However, our poll books still have a printed signature, so one of our concerns with online registration is how we get a quality original signature. Can we get that signature at PennDOT [DMV]? What if we don’t get a quality signature? I’m all for online voter registration if we can resolve some of the issues.

- I’m really willing to look at early voting, but we’d rather see no-excuse absentee voting as a good first step.

- No matter what idea you [legislators] have to improve voting, reach out to county officials. Before you put pen to paper, talk to local officials. We are the ones interfacing with voters and candidates. Know the pitfalls first. We will give good advice and good guidance to come up with real solutions.

Read the full interview with Director Feaser.
Worth Noting

• Here’s your monthly serving of alphabet soup—The International Association of Clerks, Recorders, Election Officials and Treasurers (IACREOT) and the National Association of County Recorders, Election Officials and Clerks (NACRC) have voted to merge the organizations into one super-association. We’re taking suggestions for the name of the new organization, with the requirement that it abbreviate to a catchy acronym.

• The Humphrey School of Public Affairs at the University of Minnesota is now offering an online graduate certificate in Election Administration. Congrats to Doug Chapin, the brains behind this operation (and Election Academy) for his hard work in making this happen and helping prepare the next generation of leaders in elections.

• Much of the innovation in elections technology is happening first with our military and overseas voters. Claire Smith’s new book Convenience Voting: The Case of Military and Overseas Voters takes a look at the history and development of the overseas voting experience.

• NCSL recently did some research on ballot access for presidential candidates. Specifically, how the 2012 situation—in which major Republican presidential candidates were left off the Virginia primary ballot—highlighted the challenge candidates have in reading the fine print when it comes to ballot access. Virginia amended its law and lowered the signature requirement for presidential candidates to get on the primary ballot.

• We love to give props to the folks that help us provide the most comprehensive information we can, so for all things on election dates and ballot access be sure to check out the work of Richard Berg-Andersson of Green Papers. He and his team were “blogging before it was cool,” and NCSL’s page on 2016 state primary dates couldn’t have been put together without them.

• Not everything is sunshine and rainbows in the elections world (despite our best efforts). NPR looked at the dark side of electioneering in South Texas.

• Here’s a great example of the dilemma facing cash-strapped election jurisdictions: the city of Lynn, Mass. is considering canceling a $125,000 preliminary municipal election to narrow down the candidates. While it’s more common in municipalities, states such as California and Arkansas have legislation looking at instances where it may be possible to cancel special elections, with the expectation of saving money.

• Attention election geeks: the EAC’s reconstituted Technical Guidelines Development Committee (TGDC) has hit the ground running and is proposing a new public working group structure with the goal of making the guidelines more in tune with what election administrators face every day.

• A new report from the U.S. Census Bureau showing that voting turnout is at its lowest mark since 1978 will surely add fuel to the fiery debate that is convenience voting. Be sure to check out the session on early voting, absentee voting and voting by mail at Summit!

As the presidential election season kicks into full gear, stay informed about campaign finance restrictions and regulations at NCSL’s Campaign Finance Legislation Database. Updated this month, the database tracks topics dealing with public disclosure, public financing and contribution limits, and is a tool for legislators and others to make informed policy decisions about money in politics. Thanks for pulling this data together go to Brian Cruikshank, NCSL’s legal intern, who will soon return to William & Mary Law School.

The agenda is set, the speakers are ready and the seafood is on ice at Pike Place Market—see you in Seattle next month at NCSL’s Legislative Summit! If you can’t make the meeting, check back to this Online Resources page.

Thanks for reading, and please stay in touch.

—Wendy Underhill, Katy Owens Hubler and Dan Diorio