

American Democracy Isn't Ready for This

Lessons from the iVote meltdown

[Spenser Mestel](#) May 20, 2022

This weekend, Australians will vote in the country's federal elections. The process will likely be seamless, transparent, and punctuated by countless civic-minded barbecues affectionately known as [sausage sizzles](#). This is how elections generally go in Australia, but for those in New South Wales, that wasn't the case late last year.

The state had encouraged a significant number of voters to move to an internet-voting system called iVote. In December, it melted down so badly that the New South Wales Electoral Commission not only discontinued its use but also asked a court to nullify the results of three city-council elections. It was an embarrassing failure for e-voting.

More than 650,000 online votes were cast—probably a world record, says Vanessa Teague, an election-security expert and a professor at the Australian National University. Teague has been warning governments about [vulnerabilities](#) in e-voting for years, as have cybersecurity researchers in the U.S., where systems like iVote are being expanded in [at least nine states](#).

Letting people vote from home with the click of a button is an appealing idea, especially in the U.S., where turnout is abysmal. The problem, the American Association for the Advancement of Science [says](#), is that there's no "evidence that any internet voting technology is safe or can be made so in the foreseeable future ... All research to date demonstrates the opposite."

[From the December 2017 issue: The computer scientist who prefers paper](#)

In Australia, where the electoral system is largely trusted and administered by nonpartisan officials, the scandal has more or less blown over. But neither of those things is true in many jurisdictions in the U.S. Should something similar happen here, it would most likely ignite an endless legal battle and erode what little confidence is left in our democracy.

Internet voting seems like an obvious extension of the smartphone era, a frictionless way to engage the masses of people who are eligible to vote but choose not to.

In the United States, the 2020 presidential election had the [highest](#) turnout of the 21st century, yet 77 million people—roughly a third of citizens 18 and older—didn't vote. In the [midterms](#), turnout never cracks [50 percent](#). In local elections, it typically hovers around [15 percent](#). This is a democratic crisis, and proponents of mobile voting see an opportunity.

If the internet is secure enough for us to transfer money, file our taxes, and [Zoom with our therapists](#), why can't we use it to vote? In fact we can, and we do. At least 25 states [allow](#) ballots to be returned via email or a web portal, primarily for military and [overseas voters](#), and internet-voting pilot programs have [been run](#) in more than 20 elections in Colorado, Oregon, South Carolina, Utah, Virginia, Washington, and West Virginia. Recently, a councilmember in Washington, D.C., [introduced](#) a mobile-voting bill that she argues would help engage older voters and people with disabilities or limited access to transit.

But these experiments so far have been small. The e-votes in the state pilot programs represented less than 0.2 percent of the total ballots cast in 2020. Australia learned what can happen when a substantial number of people try to use the online system: It buckles.

Voting is compulsory in Australia, and because of the pandemic, many people preferred to take advantage of iVote rather than show up in person. The New South Wales system was ill-prepared for the resulting traffic. Teague estimates that 10,000 users were prevented from either registering to vote online or digitally casting a ballot.

In the aftermath, the state's electoral commission used a simulation to calculate that three city-council races could have been flipped by the disenfranchised e-voters. Teague told me that this was a "very conservative estimate." Her own analysis, which used roughly 1,000 times more simulations, identified 39 races whose outcomes were potentially affected. But without a paper trail, there's no way to know for sure.

The collateral damage was significant. In March, a judge [agreed](#) to throw out the results of the three races and order a redo. It'll cost the state roughly [\\$350,000](#) to administer the new races and at least \$35,000 in legal fees. The council will also have to [reimburse](#) candidates for the cost of running again. The candidates, for their part, aren't looking forward to hustling through another grueling campaign.

And these were just the consequences of a malfunction that Teague calls the "least bad thing" that could happen with internet voting.

"iVote went down, and everybody knew it was down, and actually a fair number of people managed to find their way to a polling place and vote on paper," she told me. Moreover, no one in the court case questioned the credibility of the votes that were tallied before the system crashed, "even though the iVote system provides nothing resembling evidence that those votes are accurate."

Were this to happen in the U.S., there are so many terrifying possibilities that it's hard to choose a worst-case scenario. A hostile group—Russia, Iran,

QAnon—could replicate what happened with iVote and overwhelm the vote-casting portal at the last minute. What happens then: an entirely new election? A redo just for the affected voters (whoever we decide they may be)?

[Franklin Foer: Russiagate was not a hoax](#)

Or the attacker could go a more clandestine route, either flipping a small but decisive number of ballots or preventing them from being submitted in the first place. How could voters be certain that their votes were counted?

Bad actors wouldn't even have to hack the system to cause chaos. They could simply claim to have done so, and offer a few doctored screenshots to make it look real. Consider the easily debunked conspiracy theories that spread after the 2020 election—that 26 million [more votes were cast](#) than registered voters existed, that [40,000 ballots](#) from China were stuffed into ballot boxes in Arizona, that Italian military satellites [flipped machine votes to Joe Biden](#). As disinformation campaigns go, this would be a light lift. If it were for an especially close election, like the House race in Iowa that was won by just [six](#) votes in 2020, it would be even easier.

There's no joy in tearing down e-voting, which can be convenient, efficient, and hugely beneficial to those who struggle to reach or navigate polling places in person. But for now, e-voting introduces more problems than it solves. Americans have too little faith left to lose in their democracy.