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Tricky E-Voting Comes to Oz

Stewart Taggart  10.19.01 | 2:00 AM

CANBERRA, Australia -- Electronic voting could meet its match this weekend when Australian voters test an electronic system under some of the most fiendishly complex voting rules in the world.

On Saturday, 220,000 voters in the Australian Capital Territory (ACT), the national capital, will select members for their legislative assembly. Of the ACT's 80 polling places, eight will offer voluntary electronic voting, allowing voters to fill out ballots on a computer screen instead of using pencils to mark paper ballots.

This trial is the first time electronic voting has been applied to the complicated Hare-Clarke system, under which voters choose candidates by preference -- from first to last.

If no candidate gains enough first-round votes to be elected outright, the last place candidate is eliminated, and their votes re-allocated to other candidates in accordance with voters' subsequent preferences. Vote count rounds are conducted until one candidate eventually wins by gaining enough votes through the preference system.

The system is much more intricate than the "first past the post" system in the United States, where votes are tallied only once and the candidate with the most votes wins. One drawback of the Hare-Clarke system -- which the ACT and the southern Australian state of Tasmania shares with Ireland and Monaco -- is the amount of time it can take to produce a winner.

It currently can take days for winners to be determined, says Alison Purvis, the ACT's deputy electoral commissioner. By contrast, were all votes to be cast electronically, the system could spit out a credible final vote count -- excluding postal ballots -- within hours after the polls close, Purvis said. Of course, that's assuming the electronic system doesn't crash under the strain. That, in part, is what election officials will be testing this weekend.

"We had to build this electronic voting system from the ground up because of the nuances of the Hare-Clarke system," Ms. Purvis said.

Under the system, ACT voters choosing the electronic option at the polling place will be issued a one-time-use paper bar code.

The first time they swipe the bar code through an electronic card reader, an electronic ballot is presented on a computer screen. Voters will then be able to fiddle with the ballot until they swipe their bar code through the reader a second time. That will -cast the ballot and nullify the paper bar code.

Since electronic voting is voluntary, election officials have no idea how many people will opt for the system. In the previous ACT election held in 1998, roughly 4 percent of paper ballots cast were deemed invalid.

Election officials say one test of the new system will be whether the electronic system results in fewer uncountable ballots than that. Purvis hopes it will, since the computers will remind voters if they fill out voting forms incorrectly. No similar check exists for paper ballots.

In a damning report issued in July, American universities Cal Tech and MIT concluded that approximately 6 percent of American votes cast in last November's U.S. presidential election weren't counted for one reason or another --- and that was under the simpler "first past the post" system. Under the Hare-Clarke system, voters mark a series of candidate numbers on the ballots. But pencil-marked 4s can sometimes look like 9s, 7s can look like 1s and 5s resemble 6s, Purvis says. Electronic voting should reduce some of those mistakes.

In the 1998 ACT election, for instance, a routine recount of 80,000 ballots was ordered in one race in which the winner led by three votes. A recount later handed the contest to the loser, electing him by five votes after it was determined preferences were misread in a previous vote count.

"People's handwriting was hard to decipher in a number of cases, but it took us 22 days to get this result," Ms. Purvis said. "If everyone voted by computer in this election, we'd have results in 3-4 hours."

Hare-Clarke tends to put political centrists in power, but only after forcing them to deal with smaller constituencies and single-issue candidates.

In theory, voters can have the satisfaction of sticking it to the status quo by voting first preferences to fringe candidates, but without the accompanying political risk of actually putting them into power. It also avoids the problem of unwanted outcomes of protest votes.

For instance, had the preference system been in place in the United States last November, - Al Gore would probably be president now.

That's because vote preferences of Green Party candidate Ralph Nader would almost certainly have flowed to Gore, giving him a crucial margin of victory over Bush. Instead, Nader's votes split America's political left --- allowing a united American political right to put Bush into power.

The opposite occurred in 1992, when independent candidate Ross Perot split the American right, draining votes from Republican George Bush and sending Democrat Bill Clinton to the White House.

To conduct the electronic voting trial, ACT electoral officials are commandeering brand new PCs scheduled for delivery in coming months to various ACT government agencies. Voting software installed on the machines for the vote will then be erased when the computers are sent to their final local bureaucracies.

This will avoid the obsolescence problem of buying special hardware for elections that only roll around every few years.

For its part, the Australian Election Commission, the national agency charged with conducting national elections, says it will be watching the Canberra trial closely since it will be the first time electronic voting has been offered in Australia.

Australians go to the national polls Nov. 10, but no electronic voting trials on a national level are scheduled.

Frank Nesci, managing director of Election.com, an Australian election management services company, says the Canberra trial should provide an initial test as to how well-suited electronic voting may be to the Hare-Clarke system.

He agrees electronic voting should cut down on the amount of uncountable votes, which is desirable in any democracy.