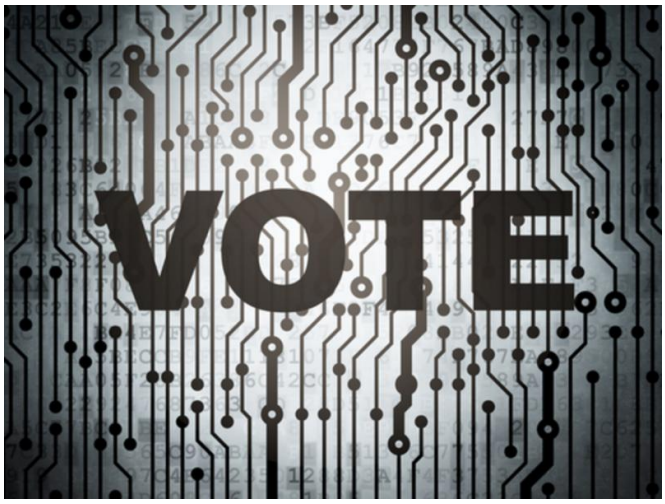
Despite experts' fears, Australia should be moving to electronic online voting

5 July 2016, by David Glance



Online Voting. Credit: shutterstock.com

Australia's current election proves that there has never been a greater need for online electronic voting. The country has come to a political standstill as the laborious process of manual counting of ballot papers is conducted by the Australian Electoral Commission (AEC). The AEC employs around 75,000 people to manage the voting and counting process. An intensely manual process has been further complicated by steps that have been introduced to avoid mishaps that occurred with the counting process in previous elections. During the 2013 election, 1,375 ballot papers went missing in Western Australia forcing WA to go back to the polls.

The answer to the lengthy and problematic voting process should be obvious. In these days of Internet commerce where we entrust our lives to online systems, voting online would seem the natural solution. Absentee voters could vote from anywhere, the cost of voting would be significantly reduced and the results would be instantaneous and accurate. There would be potentially other benefits in terms of how the names and in particular, their order, was presented to the voter. Mistakes by voters could be prevented, or at least brought to the voter's attention.

So, for all of the advantages, why hasn't Australia, and the rest of the world moved to electronic voting ?

Well, for a start, there are the experts who claim that we shouldn't implement electronic voting because "the system might not be secure; the code might not be correct; and, most importantly, if something goes wrong, we might never know."

All of these things "might" be true but they don't "necessarily" have to be true and don't in the end serve as justification for not implementing electronic voting.

For a start, paper-based systems suffer from all forms of problems, some of which may also go undiscovered. For example, critics talk about the fact that electronic voting has to be anonymous and shouldn't provide the voter with a record of their vote lest they are potentially coerced into revealing what they voted. Yet, nearly 1.3 million people vote by sending their vote in by mail with no evidence whatsoever that the people who should have completed and sent in those votes actually did so, or were not "coerced" or "bribed" when doing so. People voting in polling booths are not required to provide identification and so could just as easily have been coerced, bribed or substituted during that voting process. At its extremes, and in countries like the Phillipines, voter coercion is very real as elections are still marred by violence.

Electronic voting does present technical challenges to ensure that people can rely that it has been executed anonymously, accurately and without outside interference. From a technical perspective, electronic voting systems based on Bitcoin's blockchain technology offer one of the more

promising solutions to these requirements.

Companies like FollowMyVote in the US and veri.vote are working on blockchain-based e-Voting systems. In the case of FollowMyVote, the plan is that the solution would be open source and subject to scrutiny,

Blockchain-based voting has the benefit that voting can be done online anonymously and the process of that vote cryptographically recorded by a large number of systems, each validating the actual vote. Theoretically, this validation could be extended to outside scrutineers of the process. Recording votes on the blockchain could be combined with two-factor authentication such as that employed by a system used in Utah recently. This system allowed online voting for the Republican Party's presidential nominee during the recent US primaries.

Despite criticism against some existing voting systems, technological solutions could be found to create a verifiable and secure online voting system that would allow full democratic participation that is fully auditable. At the very least, a replacement of the postal ballot portion of the election with such a system would present no greater risk than the current process. Introducing an electronic system partially this way would also allow the public a period of time to adjust to the practice of online voting. An added advantage of online voting would be that for those voters who like traditions, less time could be spent queuing to vote and more time eating a "sausage sizzle" with friends.

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