

Inquiry on the future conduct of elections operating during times of emergency situations

Submission by

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Date: 11 November 2020

Disclaimer

This submission is made in a personal capacity. The information contained in this submission has been prepared by the author and only reflects the views of the author.

Recommendations

The author commends the following recommendations for the inquiry's consideration.

Recommendation 1

The Commonwealth Electoral Act be amended to expand the criteria for application for event based postal votes to include pandemic related issues and change the verification of the postal vote declaration to be a secret question captured at the time of the application rather than a signature.

Recommendation 2

A national body be established to both research and where appropriate provide systems and support for online voting for all Australian (and potentially including NZ) jurisdictions..

Recommendation 3

Recommend to parliament that appropriate amendments to the electoral act, giving effect to Recommendation 3¹ of the federal electoral matters committee report dated November 2018.

Recommendation 3 - The Committee recommends that a non-partisan independent expert scrutineer be appointed to each Central Senate Scrutiny Centre in each state and territory and be responsible for:

- *auditing the computer systems and processes used to capture and count votes;*
- *undertaking randomised checks between captured data and physical ballot papers throughout the count at a level that provides surety as to the accuracy of the system; and*
- *providing reports to candidate scrutineers about their findings on a regular basis during the count.*

Recommendation 4

The Commonwealth Electoral Act be amended to provide for the creation of a specialist Election Technology Review Board, to scrutinise technology used to capture and count votes. The Board should have access to sufficient information about the design, implementation, configuration and operation of electronic vote management systems to allow it to effectively assure that the systems are operated in accordance with legislation. The Board should report before and during the election only to the Electoral Commissioner, then post-election provides a publicly available assurance report to the Joint Standing Committee on Electoral Matters.

¹ Report on the conduct of the 2016 federal election and matters related thereto, November 2018, Recommendation 3.

https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Electoral_Matters/2016Election/2016_election_report/section?id=committees%2freport%2f024085%2f26083#s26083rec3

Recommendation 5

The Commonwealth Electoral Act be amended to require an audit of an electorally significant sample of voters' actual paper ballots cast against the electronic data used in the count process. The audit sample size should be chosen to ensure that the cross-check process provides adequate statistical confidence in the electoral outcome.

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1 Author Background

The author also has some 17 years' experience in the management of technology in the election process as CIO at the NSW Electoral Commission and has worked in the information technology area for over 30 years, with a particular emphasis on provision of technology within government agencies².

2 Terms of Reference

This submission responds specifically to terms of reference item "alternative voting methods including early, remote and postal voting".

3 Impact of Emergency Situations

The impact of emergency situations is highly dependent on the nature of the emergency. In this submission I will examine the effect of a pandemic situation on the potential voting channels and the controls (scrutiny) changes required.

4 Voting Channels

All Australian elections utilise a range of voting channels to enfranchise electors. These channels can be identified as two main voting types being attendance and remote voting.

Attendance voting is often identified as either election day (in polling place) and early voting (prepoll voting). Both election day and early voting follow similar procedures for issuing votes and capturing votes. The main difference is that election day votes are counted on election night by the staff in the polling place with scrutiny from local party officials while early voting is counted typically by other staff in locations identified by the Commission and sometimes after election day. The recent rise of early voting has caused challenges to election night results as many early voting centres cannot be fully counted on election night making adequate scrutiny very difficult. It is accepted that intrinsically attendance voting creates higher risks for voters during a pandemic and may be considered by some voters as being an undesirable voting channel during a pandemic.

Remote voting offers a safer alternative for voting during a pandemic. Remote voting by its nature is a form of early voting and such can compete with prepoll voting if allowed by legislation. However, remote voting has a range of issues related to integrity which are intrinsic. In particular untoward influence of electors when voting and voter impersonation are major concerns. There are two main types of remote voting being postal and electronic voting.

² LinkedIn profile
<https://www.linkedin.com/in/ian-brightwell-a038573/>

5 Postal Voting

Postal voting is the only type of remote voting currently used at the Federal level. There are two types of postal voting on demand (an application is made at every election) and automatic (general registered postal voter or universal Postal voting).

The typically most postal voting is done using an event based application which is made at a given election by an elector who qualifies under certain criteria e.g. outside Australia, etc. Once the application is accepted then the voter is sent a postal vote pack. The elector's signature on the application compared to the declaration is currently used as the main means to verify the voter's identity. In recent times the application for postal votes have been also available over the internet by the AEC. Additionally, political parties are sent out their own applications which for the most part confuse the electors increase challenges for the AEC in processing applications and should not be allowed for future elections.

The other type of postal vote is the registered postal voter who requires an application which is made by electors who fit certain criteria for all future elections e.g. disabled, etc. Once the application is accepted then the voter is sent a postal vote pack automatically at every subsequent election. The elector's signature on the original application form is used to verify the voter's signature on the vote declaration.

Rejection rates for declarations due to signature recognition and other causes can vary widely. In may experience rejection rates can often be between 2% to 7%. Scrutiny of this process is poor and no public data on the effectiveness of the verification process is available even to scrutineers.

The following are problems facing the expanded use of postal voting:

- Significant delivery failures (even when recent address provided by electors)
- Slow vote turn around potentially resulting in vote not being accepted (typically a minimum of two weeks from time application received to time vote received back)
- Not suitable for overseas voting due to slow turn around
- Verification of elector done using declaration signature which gives highly variable results depending on the person checking the signatures.
- Mail service reducing frequency of service and increasing price.
- Mail service reducing has limited capacity to cater for surge caused by postal votes and often staggers delivery.

Some discussion has been had about the use of universal postal voting. This approach in my view is not an option as the postal system, I believe would not be able to cope with the load which would be created by a universal postal vote at a major event. Also, the electoral roll addresses may not be reliable enough for many electors. This is largely due to electors moving and not updating their address details. Finally, the verification by signature would be problematic as many signatures on enrolment applications are very old and would potentially give a very high rejection rate.

The most viable use of postal voting during a pandemic would be to expand the criteria for application for event based postal votes to include pandemic related issues. Also promote the use of online application for these postal votes (a current practice). Additionally, change the verification of the postal vote declaration to be a secret question captured at the time of the application rather than a signature (process which has been used in NSW elections). The use of a secret question significantly improves the rejection rate for postal vote applications.

6 Internet Voting and Computer Counting

Internet voting has a poor reputation in the minds of many key electoral decision makers over the past few years. Some of this reputational is justified however some (in my view) is simply an over hyping of technical issues which have a very low potential for causing widespread undetected integrity issues. The result of this type of vigorous technical objection to internet voting and the need for a replacement for overseas postal voting is that electoral authorities are implementing very dubious electronic systems for returning ballots.

The recent New Zealand election allowed faxing and the uploading of a picture of a ballot³ over the internet as a returned mechanism. [REDACTED]

[REDACTED]

[REDACTED]

These implementations combined with the NSW iVote system shows that internet voting is being pursued in our region without major calamity (not withstanding controversy) and the demand seems to be growing.

There are risks and failures in every type of voting channel (even paper-based attendance elections). However, the need for a reliable remote voting solution which does not use the post is growing as the post will probably not be a viable solution for large-scale electoral operations after the next two election cycles.

Therefore, we need to increase our research and implementation efforts in the use of the most obvious replacement for postal voting which is using the internet for casting and return of ballots. Noting the internet is currently being used in many parts of the electoral process e.g. results publication, enrolment updates, postal vote applications, return of ballots of some jurisdictions.

One of the main obstacles against the use of internet voting is a claim that it does not have the integrity of paper based postal voting. This claim in my view is unreasonable but given we do not fully acknowledge the risks and failures associated with our current paper-based vote return, it has proven to be a strong argument.

³ Guardian, Overseas New Zealanders urged to 'meddle' in election – here's how to vote
<https://www.theguardian.com/world/2020/oct/05/overseas-new-zealanders-urged-to-meddle-in-election-heres-how-to-vote>

⁴ ACT Overseas e-voting 2020 election
https://www.elections.act.gov.au/elections_and_voting/2020_legislative_assembly_election/overseas-e-voting-faq

It is understandable that in the past we have not publish detailed data on electoral operations which shows faults and failures of the system. It served no purpose to undermine the public's confidence in the current system when there was no readily available alternatives. However, this situation creates a problem when trying to determine the comparative risks associated with the use of the internet to capture and return ballots. Some very vocal and media aware computer science experts⁵ have formed a view that based on their own informal comparative risk assessment, internet voting should not be used for parliamentary elections. They believe this because it is a very difficult computer science problem which is yet to be fully solved. They also believe current paper based postal processes are significantly more secure and reliable than any electronically returned ballot.

Given the increased use of computers for the handling of votes in elections it is important that the AEC and other electoral bodies in Australia are in a position to make effective decisions about the risks and benefits. Also the implementation of these systems is complex and generally beyond the capacity of most state based electoral bodies to undertake alone. Therefore I recommend a national body is established to both research and where appropriate provide systems and support online voting for all Australian (and potentially including NZ) jurisdictions.

7 Improved Scrutiny

In addition to the increased use of the internet in the electoral process, computers are now being used to count paper ballots including ALL senate ballots. Currently a computer is exclusively being used to determine the outcome of the senate count and any senator that is elected on other than first preferences votes completely relies on the unaudited computer count for their election.

The increased use of computers in elections has not been followed by improvements in scrutiny techniques for these more complex environments. In particular recent submissions to the EMC⁶ by the author has identified inadequacies of the current partisan scrutiny system when applied to the computerised senate count.

The following are the three main recommendations resulting from the prior submission⁶:

- non-partisan independent expert scrutineer be appointed to each Central Senate Scrutiny Centre to scrutinise the senate counting system's operation (Recommendation 3);
- creation of a specialist Election Technology Review Board, to scrutinise technology used to capture and count votes (Recommendation 4);
- all electronically captured and counted paper ballots should be subject to an audit using an electorally significant sample of voters' actual paper ballots cast against the electronic data used in the count process (Recommendation 5).

⁵ Verified Voting, Internet Voting - Internet voting is dangerously risky
<https://verifiedvoting.org/internetvoting/>

⁶ Submission Ian Brightwell, Inquiry into and report on all aspects of the conduct of the 2019 Federal Election and matters related thereto
<https://www.apf.gov.au/DocumentStore.ashx?id=b6f70b16-4427-4704-9804-450ede29f831&subId=669021>

Note the above requirement for improved scrutiny should NOT be interpreted to suggest that the AEC as an organisation cannot be trusted. I personally have complete confidence in the integrity of the current AEC management and staff. However, this does not mean error or external undetected influences on systems cannot occur or we our election system may face integrity issues in 20 years which improved scrutiny would detect.

The purpose of this submission is to improve transparency of the election process for future elections, thus reducing the potential for undetected errors or system interference occurring undetected at future elections.