



LEGISLATIVE ASSEMBLY

FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON JUSTICE AND COMMUNITY SAFETY

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Submission Cover Sheet

Inquiry into 2020 ACT Election and the Electoral Act

Submission Number: 016

Date Authorised for Publication: 5 May 2021



Friday 30 April 2021

The Committee Secretary
Standing Committee on Justice and Community Safety
ACT Legislative Assembly
By email: LACommitteeJCS@parliament.act.gov.au

Dear members

Submission to the Inquiry into the 2020 ACT Election and the Electoral Act

Thank you for the opportunity to make a submission to the Inquiry into the 2020 ACT Election and the Electoral Act.

I make this submission in my personal capacity as a citizen with an interest in electoral systems. My submission will primarily address some personal anecdotal observations I made during the 2020 election, as well as my concerns around electronic voting.

I was employed by the ACT Electoral Commission as a polling official at the 2020 election, and have in the past also been employed by the Australian Electoral Commission as a polling official in federal elections. My professional background is in software engineering and open source software systems, though I do not claim to have any specific expertise in election software or electronic voting security, and as such my comments about electronic voting should be treated as those of a generalist.

Impact of COVID-19

As a polling official, I found that my personal experience was that the Commission's polling place COVID-19 precautions were implemented at my election day polling place with reasonably high consistency by comparison to most retail and commercial venues. The precautions at my polling place did not appear to cause any significant issues for voters, and staffing was more than adequate given the reduced election day turnout. Overall, my impression as a voter and a frontline official was that the Commission's COVID-19 response measures were well executed.

Electronic voting

I am deeply concerned by the Commission's approach to the development of the new eVACS and OSEV systems in 2020.

The Commission states that the eVACS redevelopment project commenced in July 2019.¹ Contracts for eVACS redevelopment, OSEV development, the eVACS source code audit and OSEV penetration testing were awarded in July 2019, January 2020, July 2020 and August 2020

1 ACT Electoral Commission, Report on the ACT Legislative Assembly Election 2020, p. 79

respectively.²

The eVACS audit documentation, as obtained under FOI by Dr Vanessa Teague, shows that BMM Testlabs issued the audit certificate for eVACS Voting on 24 September 2020 based on source code supplied on 2 September 2020, and for eVACS Count on 8 October 2020 based on source code supplied on 2 September 2020 with further updates up to 8 October 2020.³ Voting commenced on 28 September 2020, with counting commencing on election night, 17 October 2020.

It seems incredibly risky to leave the process of completing the audit for the voting module until four days before polling, and not completing the audit for the counting module until ten days *after polling has commenced*. The late timeframe for auditing seems inevitable, however, given the overall timeframe for the redevelopment of an entire complex, bespoke election management system. These issues are made even more concerning given the introduction of a brand new internet voting system – internet voting is an incredibly fraught area that many experts believe is essentially impossible to implement securely, and yet the Commission did not even award the development contract until eight months before the election. I note that by comparison, the Commission states that negotiations on temporary office accommodation – a far more standard business activity by comparison to complex, custom, security-sensitive and mission-critical software development – commenced as early as 1 February 2018, well over two years before the election.⁴

Dr Teague and her colleagues have identified a number of issues with the eVACS counting implementation, which the Commission has now worked to address. In the case of some of the issues such as the “drafting error” surrounding transfer of fractional surpluses, which was identified specifically in the BMM Testlabs audit report,⁵ the legislation could easily have been amended had the Commission identified the issue with sufficient time to let the matter be handled by the Assembly.

I am also deeply concerned that with the redevelopment of the eVACS software for 2020, the Commission has moved away from the open source software licensing that was used for all previous versions of the eVACS software. Instead, the Commission is only offering source code to security researchers under a Deed of Confidentiality, the terms of which are only made available on specific request. As this Committee is aware, for various reasons no researchers saw fit to sign the deed, and only “a couple of people” even asked for a copy. The Commission’s explanation that the deed is required to address issues of “disinformation and misinformation” is difficult to believe, given the history of the Commission’s engagement with researchers.⁶

The Commission has unilaterally replaced an open source approach, where eVACS source code was made available with a minimum of bureaucracy (and an ability to reuse and adapt, which in my opinion ought to be the default for most taxpayer-funded intellectual property) under the GNU General Public License, with a Deed of Confidentiality that was developed without

2 Contracts EC2017481, 31093.210, EC202067 and ECForesight092020, available from <https://tenders.act.gov.au>

3 BMM Australia Pty Ltd, ACTEC.1005.01 2020 eVACS Voting Test Report, <https://www.righttoknow.org.au/request/6754/response/19177/attach/5/EVACS%20Vote%20certificate.pdf>; BMM Australia Pty Ltd, ACTEC.1005.01 2020 eVACS Count Test Report, <https://www.righttoknow.org.au/request/6930/response/19349/attach/2/EVACS%20Count%20certificate%20report%20Certificate%20BMM%207%20Oct%202020.pdf>

4 ACT Electoral Commission, Report on the ACT Legislative Assembly Election 2020, p. 80

5 BMM Australia Pty Ltd, ACTEC.1005.01 2020 eVACS Count Test Report, <https://www.righttoknow.org.au/request/6930/response/19349/attach/2/EVACS%20Count%20certificate%20report%20Certificate%20BMM%207%20Oct%202020.pdf>

6 ACT Legislative Assembly Standing Committee on Justice and Community Safety, Transcript of Evidence – Inquiry into annual and financial reports 2019-2020 and ACT budget 2020-2021 – Friday, 19 February 2021, <http://www.hansard.act.gov.au/hansard/2021/comms/jacs01a.pdf>, p. 51

adequate consultation with relevant experts in the community. It does not reflect well on the Commission's commitment to transparency and public accountability.

Given the importance of ensuring that eVACS source code is available to ensure public confidence in the integrity of the result, I believe that the Assembly should enshrine access to voting system source code in the Electoral Act.

Recommendation 1: The Act should be amended to require that to the greatest extent reasonably possible, the source code to all aspects of the electronic voting and counting systems must be made available under an open source software licence. At the very least, the Act should require the release of the source code for research and auditing purposes under a set of terms developed in consultation with relevant election security experts from academia and civil society.

I also note that besides the software bugs that have been publicly identified, and the issues surrounding source code availability, eVACS is not keeping up with international best practice methodologies for providing assurances of election integrity. For example, risk-limiting audits, which provide statistical guarantees around ballot paper digitisation that are independent of auditing the software source code, are now becoming increasingly widespread in other jurisdictions and are now a legal requirement in some US states.⁷ End-to-end verifiable voting is another area of active research where, as Australia's only jurisdiction to use electronic voting machines, the ACT has a responsibility to lead.

Recommendation 2: The Commission should work with experts from academia and civil society to investigate the development of risk-limiting audit methodologies and/or end-to-end verifiable voting methodologies for the Hare-Clark STV system, and the development of an electronic voting system using such techniques.

Increasing voter turnout and participation

As a relatively young Canberran, who like many people in this city migrated from interstate to study at university and work as a graduate, my anecdotal experiences make it difficult to trust the reliability of Eligible Elector Population metrics for under-30s.⁸

In my personal experience, for a number of reasons (vehicles owned in the name of interstate family members, cheaper vehicle registration in other states, not having a driver's licence at all), a considerable proportion of young Canberrans who have moved from interstate refuse to obtain a new driver's licence or re-register their vehicles in the ACT – even if they have lived in the ACT for several years. This significantly reduces the utility of one of the three data sources (and I suspect the most significant of the three) currently used by the AEC for their Direct Enrolment and Update program.⁹ When asked about electoral enrolment, these voters will often tell you that they still vote at federal and state elections for their former address or parental home, and will apply for a postal vote or queue up for lengthy periods at AEC interstate voting centres come federal election time – even though they have lived in the ACT for years on a permanent basis and are obviously obliged to enrol here.

I have also found, in my personal experience, that people I knew were unaware of the new provisions allowing on-the-day enrolment in 2020, and having missed close of rolls, they did not consider attempting to vote.

7 Eric Lynch, *Passing Your Vote Through Security: The Rise of Risk Limiting Audits in Rhode Island*, <http://electls.blogs.wm.edu/2018/01/29/passing-vote-security-rise-risk-limiting-audits-rhode-island/>

8 ACT Electoral Commission, *Report on the ACT Legislative Assembly Election 2020*, p. 16-19

9 Australian Electoral Commission, *Direct Enrolment and Update*, https://www.aec.gov.au/Enrolling_to_vote/About_Electoral_Roll/direct.htm

Recommendation 3: The Commission should work to identify additional data sources to enrol Canberrans who have moved recently, and should publicise on-the-day enrolment more heavily.

Restrictions on campaigning activities outside polling places

During the election period, I made a complaint regarding a sign being exhibited by a business owner in the window of his business in a shopping arcade within the 100 metre exclusion zone near a polling place. Before lodging the complaint, I brought the matter to the attention of the business owner, who stated that he was very certain that the sign did not breach the 100 metre rule due to the nature of his private business premises. As the Commission did not respond to my complaint, I am not sure of their view on the applicability of the rule in this particular situation.

Recommendation 4: The public information factsheets regarding the 100 metre rule should be clarified to specify explicitly how the rule applies to private property within the exclusion zone, including elaborating the meaning of “exhibit a notice ... able to be clearly seen by electors approaching, or at, the polling place”.

Conclusion

As both a voter and an election worker, I was extremely impressed with the efforts the ACT Electoral Commission made to ensure that Canberrans were given a free and fair election amid a truly exceptional public health emergency.

However, the Commission’s approach to electronic voting continues to leave much to be desired. I hope the Assembly will take measures to ensure that the issues we saw in 2020 do not happen again, and that in future the ACT’s electronic voting systems reflect current world’s best practice. Canberrans deserve the strongest possible assurances of the security and integrity of their vote, and as the first Australian jurisdiction to adopt electronic voting, the ACT needs to set an outstanding example for the rest of the nation.

I once again thank the Committee for the opportunity to make this submission.

Yours sincerely

Andrew Donnellan