

TRANSCRIPT

ELECTORAL MATTERS COMMITTEE

Inquiry into electronic voting

Melbourne — 22 August 2016

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**Necessary corrections to be notified to
executive officer of committee**

The CHAIR — Thank you very much for your willingness to come along and talk to your submission, which we have all seen. You have been in the room when you have heard me introduce the committee, so I assume I do not have to go through that process again. Can I check that you have read the guide to giving evidence at a public hearing?

Mr BURTON — I have.

The CHAIR — And you fully understand that obviously you have parliamentary privilege and protection in this room only. Could you please state your full name and your business address and indicate to us whether you are attending this hearing in a private capacity or whether you are in fact representing an organisation. Could you bear in mind that Hansard is recording every word you say, and very accurately in my experience. If you could just do the bit about your name and address and then perhaps make some comments about your submission, we would be grateful. Thank you.

Mr BURTON — My name is Craig Alexander Burton. I am appearing in a private context, and I do not have a business address.

The CHAIR — I do not need to know your private address.

Mr BURTON — I am the guy who goes last, so I get to make some comments about other submissions.

The CHAIR — I actually requested that you speak to your submission.

Mr BURTON — My submission was quite long, and I do not just want to regurgitate my submission, but I feel I have got some points — —

The CHAIR — You could make whichever points you would like.

Mr BURTON — It is a little known fact that for the Democratic national convention in 2008 every single foreign vote was collected via a small office in Lygon Street, Carlton, above Sportsgirl. I was very proud of that fact, but now I advocate against the use of internet voting for the election of heads of state.

I have a confession to make. In my submission to you I made a mathematical mistake. I know this because after I handed my submission in, in a bit of a rush, I had a colleague at a university check it for me — peer review — and he pointed it out. I will now mention it, because it lets me make another point.

If you have a ballot box and it has 1000 votes in it for Bob and for Jane, and you count them and Jane wins by 10 votes, if you pull out 15 votes at random, Jane still wins. In fact there is only a 1 in 170 chance that she will not win. As you progressively pull out more votes at random — let us say they have been lost off the tops of trucks — Jane continues to win in the vast, vast, vast majority of counts. My point is that in paper elections a lot of these mistakes are random mistakes — random errors made by staff, random bundles lost, random additions up. These random errors do not favour certain candidates, whereas when elections are run with computers and votes are collected electronically, computers hardly ever do anything at random. In fact it is very hard to get computers to do things at random. The kinds of mistakes and changes that computers make are systemic. The risks between using a computer and manual processes are very hard to compare. It is very hard to actually say, ‘We’ve looked at paper voting, we’ve looked at electronic voting and we think the risks are like this’. That is, I think, misleading.

I want to make a comment about the use of experts in elections. It is the case that you need to be quite skilled to do electronic voting. Other people who have provided testimony have said that perhaps those skills go beyond what electoral commissions have. But I want to put forward that no matter how electoral commissions collect votes, this is their core competency. Whether voting on paper ballots, electronic or tied to the legs of pigeons, it is their core competency. It has to be something they can do natively.

To give you another example of a rarefied talent, the electoral commission has a psephologist. The psephologist’s job is to jump up when a weird thing happens that is unusual, such as a three-way tie in the count. This psephologist is brought forward and he or she says, ‘Okay, this is how we resolve this’. I happen to know the political parties each have a psephologist. There are very few of these people — they are very specially skilled — but they are part of the election process, so I do not see the paucity of e-voting skills in this town as being a reason not to attempt e-voting with local talent, and I do not see it as a justification to outsource.

Another piece of testimony you received today was about vVote. I was responsible for vVote. I led the project to build it. It was mentioned that vVote is a gesture-based system and that was not appropriate. In fact it had a keypad, so it works like a push button phone — it could work like a phone.

The comment I want to make about providing internet voting to people with disabilities or barriers to voting is that you are putting at risk the very people that you seek to enfranchise. If you create a new internet voting service for people who are blind or have low vision or do not speak English, and something goes wrong with that service, you are harming the very same group you have sought to enfranchise.

I have just one last anecdote. I am going to finish my random shopping list here with what I feel that you might be able to do as a committee at your level. My very last point was that various internet voting pilots and runs have collected strong support from surveys. Some 95 to 98 per cent of people loved it. I want to point out that vVote was used in London, and we asked people there what they thought of it, but we selected those people at random as they left the voting locations. They did not come forward to tell us what they thought of it. When people do a survey, it is very important to understand: are the people who loved it coming forward to do the survey and only they, or are you reaching out and grabbing people at random? That is an important thing to point out.

I would like to suggest with regards to legislation, you have been asked to consider changing the Electoral Act to allow remote collection of votes electronically, and I would strongly advise you not to change the law to allow that. I think loads of deliberation is needed beforehand, a lot of expert testimony and a lot of transparency in how electoral commissions are choosing and advocating these systems. The VEC says it should do iVote — I have read their submission — so it would be nice to understand what they went through to make that decision technically.

Secondly, in Australia we do not have an independent observer's role; they do in England. In England you can go to the electoral commission and say, 'I want to be an independent observer not aligned with a candidate'. I myself was running an election in England had to take this observer with me down to my data centre and open up the e-voting server cabinet. That is what he wanted to see. I think the Electoral Act should be changed to have this additional role in Victoria to improve oversight.

Of course I want you to widen e-voting. I think the collection is very narrow. If you consider the current people who are eligible to use e-voting, it is only blind, low vision, cannot read in English, fine motor and overseas electors. I think that should be broadened. But ultimately I would like you to consider that elections just cannot be outsourced. There is no room whatsoever for vote handling and vote collection to be performed outside a commission by a third party. Thank you. Sorry it was a bit of a mess.

The CHAIR — No, thank you very much. Again, thank you for your willingness to spend such an amount of time doing your submission. There were many, many features of your submission that resonated immediately with me. Thank you for your willingness to come along and expand on that.

Ms BLANDTHORN — We have heard about the end-to-end verification of vVote, but I notice that your submission referred to Scantegrity in the US. Can you tell us a little bit about how that works? Or is it similar?

Mr BURTON — No, they are very different. Scantegrity is a fully end-to-end verifiable electronic voting system, but the electors actually vote on paper and they colour in circles. It is like those old surveys you used to fill in where you coloured in a circle and then it was scanned, except they use this incredible magic marker, and hidden in the circles that you colour in when you colour one in — so you pick Susan or you pick John — a code appears. Then those codes are harvested by the system, and the system is able to prove back to its electors that they made the choices they did based on these revealed codes. It is quite amazing. The reason we did not try and use it here in Victoria is that it was not a good fit with proportional representation, because the number of little ovals you would have to colour in would end up being huge — huge. Plus it was paper based, and our remit was to serve people with low vision.

Ms PATTEN — I think one of what seems to be the biggest criticism of vVote for people with low vision was the inaccessibility of it — that it was only available at a handful of polling places and it was not easy to access. I keep thinking that if we were to do kiosk voting like vVote at every polling place, and given the speed at which I replace the operating system on this machine, you would only be able to use those units probably once, and then they would be replaced. So every four years you would be replacing the units. I just wonder if

that is actually feasible, whereas looking at something like an iVote system where people with low vision, for example, can use their existing tablets that are also set up for them to use as low vision — to me that still seems to make more sense, from a practical position. But I can appreciate your concerns of the security system. Or are you in favour of that too?

Mr BURTON — I have proposed other uses of vVote that would allow people to use their own devices. A lot of low-vision people and blind people are very comfortable with their own devices.

Ms PATTEN — Yes, exactly.

Mr BURTON — They do not want to use a new device. That is a fair call. But a constraint in the verification system for vVote is that they have to pass that vote over to us at some supervised place. There has to be some oversight. One of our vVote devices would be there and would listen to their device — show them the vote it got, or say it to them — and then they are done. So the entry would take place on their device, but the verification is enforced by us.

Ms PATTEN — Presumably — I am not sure if it was yourself, but someone was pointing out — if there is any USB input, if there is any input onto that kiosk, there is the ability to manipulate the system. So if you were relying on a device talking to another device wirelessly or via USB connection, does that offer the opportunity for them to put a bug into the system?

Mr BURTON — Potentially certification would pick it up.

Mr SOMYUREK — In your contribution you were talking about political parties and the electoral commissions having in-house expertise with respect to technology, I guess you were referring to?

Mr BURTON — Yes.

Mr SOMYUREK — And you said that we have all got — the parties and the AEC — psephologists.

Mr BURTON — Yes.

Mr SOMYUREK — Their role is — I guess, if you will — a scientific study of past elections. That is what their role is; it is not necessarily technical, especially in the area of ICT. So what did you exactly mean by that? Just because they have got psephologists does not mean they have got the technical expertise.

Mr BURTON — No. My point was that the competency of the electoral commission to fully understand every aspect of the election is generally housed in a very small number of staff so that the minutiae, the details — and the example I gave was a three-way tie in an STV count — —

Mr SOMYUREK — There needs to be a call, and a psephologist would make that call, based on — —

Mr BURTON — He makes that call. He or she makes that call, yes. They are there for that purpose.

Mr SOMYUREK — Right. So what you are saying is: you still need the in-house expertise, technical expertise, combined with the psephologists?

Mr BURTON — That is right.

Mr SOMYUREK — Working together —

Mr BURTON — Or potentially.

Mr SOMYUREK — with the ICT?

Mr BURTON — Yes. I foresee a kind of an e-voting psephologist, if such a thing existed, and that would be someone who lives with the electoral commission and understands what the e-voting system is doing. So when there is some kind of failure — so all the electors get to do a verification, and lo and behold, if one of them ever happens to fail, it points to a potential serious problem — the commission can confidently reach the staff member or small group of staff, who will say, 'Okay, it means this. This is a potential risk. It is confined to this polling station or this machine. This is what you do'. Then that particular role can also use the right language

when dealing with the media — ‘We had a voter fail one of our audits’, let us say, ‘It means this’ or ‘This is the chance that the trouble is larger than this or not’. That is their role.

Mr DIXON — You mentioned that perhaps the next step is to expand vVote. Where would be the next group you think would be the logical place to go?

Mr BURTON — Probably absent voters. That is a logistically complex, expensive — —

The CHAIR — Do you mean absent as in within the state of Victoria or do you mean overseas?

Mr BURTON — Well, both, but also within Victoria.

Ms PATTEN — But they would still have to go to a polling centre to do that absent vote.

Mr BURTON — Correct.

The CHAIR — Can I just seek some clarification on your ‘My personal plea to EMC’ section? You have actually said you are:

... confident 99 per cent of the world’s elections can actually be run over the internet — just NOT the high-stakes public elections.

Mr BURTON — That is right.

The CHAIR — So in an Australian context are you referring, obviously, to the national government? Are you referring to state government specifically?

Mr BURTON — Yes.

The CHAIR — And council?

Mr SOMYUREK — Councils not.

The CHAIR — I am asking the question of the witness. Is that council, do you mean by that?

Mr BURTON — I would be nervous about that. In fact an interesting debate came up the other day because heads of state are changing in England. The current Prime Minister of England was chosen within the party, within the Tory Party. Normally I would like to think that voting within the party could be internet voting thing as they pick their various leaders, but what if the vote that they are running is effectively for Prime Minister? You do not want that to run on the internet. So the more I think about it, the less of the election I would like to see run online. The Oscars, the Academy Awards, are run on the internet.

Ms PATTEN — The California legislature uses internet voting.

Mr BURTON — Within its — —

Ms PATTEN — Yes, or uses a computer voting system within its legislature.

Mr DIXON — Legislators, yes.

Ms PATTEN — They press a button — yes or no.

Mr BURTON — Parliament; that is good. That is — —

Mr SOMYUREK — This is a good one to sort of probe deeper.

The CHAIR — Go for it.

Mr SOMYUREK — So you are saying pre-selections, primaries, are okay?

Mr BURTON — For our? Sorry, keep going.

Mr SOMYUREK — It is a fair point. So federal elections, electing people into Parliament, state elections and council elections, when we are actually directly electing people into office.

Mr BURTON — That is right.

Mr SOMYUREK — You are saying it is too high risk for that?

Mr BURTON — I am saying that, yes.

Mr SOMYUREK — Because we are the ones that actually elect the Prime Minister.

Mr BURTON — Yes.

Mr SOMYUREK — So it is high risk, but internal preselections of parties it is okay.

Mr BURTON — It is just lower risk. I would not say absolutely certainly, but there is certainly a level above which it seems highly inappropriate.

Mr SOMYUREK — It is not to do with volume at all; it is to do with just the stakes?

Mr BURTON — What could go wrong. So what happens if the wrong person is picked? If they are picked within the party, it is contained within the party, maybe they can fight it out in there and resolve it and the general public are not affected, but — —

The CHAIR — Could I ask you please — and you do not have to give an [inaudible] response — you said that in doing this submission a colleague pointed out an error to you. Is the error of such substance that we might need to know what it is by you submitting an addendum or were you just being — —

Mr BURTON — No, it is true. If you want me to give you a passage to replace one that is in there — —

The CHAIR — Yes, you do not have to explain the whole detail to us now, but if you wanted to resubmit a paragraph or something, it would be helpful to us.

Mr BURTON — Okay. I made a fixed version of it already, so I can submit it to you.

The CHAIR — All right, that would be terrific because this has gone up on the web obviously, as is, so we might make an amendment if that is the case.

Mr BURTON — Sure, thank you. That would be great.

The CHAIR — Thank you very, very much, Mr Burton, for coming along and speaking to us and for all of your expertise and knowledge. You will get your Hansard transcript in two weeks, and obviously you can make minor factual amendments to that. Thank you very much, and if I could again thank everyone — the members of the committee, the staff and the witnesses for making today go so smoothly, and bear in mind that we will recommence these public hearings at 10.00 a.m. this Wednesday. Thank you very much. The hearing has now concluded.

Committee adjourned.