4

Trial of electronically assisted voting for electors who are blind or have low vision

Evaluation approach

4.1 Prior to the 2007 federal election trial of electronically assisted voting, some electors who are blind or had low vision were only able to vote at federal elections by having another person assist them to complete their ballot papers. While this enabled these electors to participate in elections, it meant that their votes were not secret and independent.

4.2 As noted in chapter 1, the threshold issue for the committee is whether the improvement in the quality of the franchise for electors who are blind or have low vision who, by using electronically assisted voting were able to cast a secret and independent vote, should be continued given the significant cost incurred in providing this service.

4.3 The committee has also looked at a number of broader considerations including:

- the number of people who participated, or who might have otherwise benefited from the technology adopted for the trial;
- the usability of the voting system and its possible use by others;
- alternative voting systems; and
- planning and consultation by the Australian Electoral Commission (AEC).

4.4 The committee's evaluation of the trial relies heavily on material prepared by the AEC, including the AEC's own review and an evaluation undertaken by a contractor on behalf of the AEC. In addition to this material, the committee has drawn on submissions to the 2007 election inquiry and experiences in other jurisdictions.

Background

Number of electors who are blind or have low vision

4.5 How many blind or low vision electors require assistance in casting their vote? There are a number of sources of information that put the number of electors who are blind or have low vision at around 160,000.

4.6 Vision Australia has noted estimates in 2002 of approximately 3.5 million Australians who have difficulty accessing standard printed material for a variety of reasons. Of these, 193,300 people were blind or had low vision.[1] Another estimate quoted by the Fred Hollows Foundation puts this figure at 293,000 Australians who are blind or have low vision.[2]

4.7 A 2003 survey by the Australian Bureau of Statistics estimated that there were 22,600 people in Australia with total loss of sight and 261,800 people who had a partial loss of sight. People aged 65 years or over make up almost two-thirds of those with a total or partial loss of sight.[3]

4.8 Another data source included in the contractor's evaluation report of the trial put the number of potential electors who are blind or have low vision at around 158,000.[4]

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1 Vision Australia, 'Financial literacy, banking and identity conference, 25-26 October 2006, RMIT University', viewed on 17 November 2008 at http://www.visionaustralia.org.au/docs/services/RMIT%20FINANCIAL%20LITERACY%20ETC%20CONF%20PAPER.doc

2 The Fred Hollows Foundation, 'Blindness statistics information sheet', viewed on 17 November 2008 at http://www.hollows.org.au/Assets/Files/info_sheet_blindness_statistics.pdf.

3 Australian Bureau of Statistics, *Disability, Ageing and Carers: Disability and Long Term Health Conditions* (2003), Tables 1 to 11, cat no 4430.0.55.001, viewed on 17 November 2008 at http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/CA2568A90021A807CA256F3B00761DA5/$File/4430055001_oct2004.xls (table 4).

4 Sheridan and Associates, *Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report* (2008), p 27.

4.9 While it is clear that estimates of the potential number of electors who are blind or have low vision and who may benefit from electronically assisted voting vary, there is strong evidence that with the Australian population ageing, increasing numbers of electors will be affected by age-related vision loss.[5]

4.10 It is important to recognise that not all electors who are blind or have low vision would utilise electronically assisted voting facilities should they be provided at future elections. It has been noted that many electors who are blind or have low vision are comfortable with the range of options already available to them including casting an assisted vote at a pre-poll centre or ordinary polling booth, or, for those with limited vision, completing postal votes using electronic magnifiers in their own homes or in other locations.[6]

Electronically assisted voting in other Australian jurisdictions

4.11 Prior to the 2007 federal election, electronically assisted voting for electors who were blind or had low vision had been possible at selected pre-poll voting centres for ACT elections in 2001 and 2004 and at special 'e-centres' for the Victorian state election in 2006. An assisted voting system has also recently been developed in Tasmania and was provided for use at a single location in a recent election. The systems used in each of these jurisdictions differ and they are all different to the system trialled at the 2007 federal election.

Australian Capital Territory

4.12 The ACT's system ('eVacs'), uses standard personal computers as voting terminals, with voters using a barcode to authenticate their votes. Voting terminals are linked to a server in each polling location using a secure local area network. eVacs is not restricted to voters who are blind or vision impaired — it may be used by any voter wishing to do so.[7]

4.13 Prior to voting a polling official marks the elector's name on the roll in the normal way and issues a card containing a barcode for the relevant electorate. To activate the system, the barcode is swiped through a reader,

5 Vision 2020 Australia, *2006-07 Annual Report* (2007), p 11.

6 Frost T, Royal Society for the Blind of South Australia, transcript, 20 August 2008, p 43.

7 ACT Electoral Commission, 'Electronic voting and counting', viewed on 4 December at www.elections.act.gov.au/elections/electronicvoting.html.

which then causes the ballot paper for the electorate to be displayed on the computer screen.[8]

4.14 Electors voting electronically sit in a normal cardboard polling booth and face a horizontally mounted computer monitor. Electors are directed by the monitor, or by audio instructions via headphones (in their choice of 12 different languages), and make their selections through a standard numerical keypad. If an elector makes a mistake in numbering the ballot paper that would result in an informal vote, a notice is given, and the elector can choose either to continue or go back and make the required corrections to the ballot paper. Once an elector is satisfied with their vote, they are asked to swipe the barcode again to register their vote. Once the barcode is swiped for the second time the vote cannot be changed. The barcode card is then placed in a ballot box on the way out of the polling place.[9]

4.15 Votes are recorded electronically with no paper output. Votes are later downloaded and included in the count.[10]

4.16 Assisted electronic voting has been available at three elections (2001, 2004 and 2008) in the ACT. The system is used in five pre-poll voting centres, which are open for 3 weeks before polling day and on election day as ordinary polling places. At the 2004 election more than 28,000 votes were cast electronically.[11]

Victoria

4.17 The Victorian system uses non-networked computers which allow users to receive instructions via a computer touch screen or by audio instructions (in English only), via headphones.

4.18 Prior to voting, eligible electors wishing to vote electronically are directed to an electronic issuing point where their enrolment details are checked and then they are issued with a smartcard ('electorate card') that contains the elector's district and any accessibility options that the elector has selected (eg: font size, font colour and volume).

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8 ACT Electoral Commission, 'Frequently asked questions – electronic voting and counting', viewed on 16 January 2009 at http://www.elections.act.gov.au/faqsvoting.html.

9 ACT Electoral Commission, 'Frequently asked questions – electronic voting and counting', viewed on 16 January 2009 at http://www.elections.act.gov.au/faqsvoting.html.

10 ACT Electoral Commission, 'Electronic voting and counting', viewed on 4 December at www.elections.act.gov.au/elections/electronicvoting.html.

11 ACT Electoral Commission, *ACT Legislative Assembly Election 2004 Electronic Voting and Counting System Review* (2005), p 1.

4.19 Selections are made via the touch screen or by a standard keypad with important keys identified with raised plastic 'bumps'. Electors may cast an informal vote but are given a warning and a further opportunity to revise selections before a vote is finalised.

4.20 After an elector completes their vote they return their electorate cards to election officials, who wipe and re-encode them for the next elector. Preferences are stored in the voting kiosks and then sent to the Victorian Electoral Commission's head office where the files are loaded onto one computer, the ballot papers are printed, sorted and distributed to counting centres.

4.21 Electronically assisted voting for vision impaired electors was trialled for the first time at the 2006 Victorian state election and was limited to six locations operating as pre-poll centres in Melbourne and selected regional centres and also on polling day, with 199 votes cast.[12]

4.22 Electronically assisted voting for electors who are blind or have low vision will continue to be provided by the Victorian Electoral Commission at future state elections. However, the Victorian Government is yet to determine whether it will expand access to other groups such as those with a print disability.[13]

Tasmania

4.23 The Tasmanian system ('VI-Vote'), allows voters to use a keypad to enter preferences by following audio prompts or to use magnification to allocate preferences using a mouse. If a voter tries to print their ballot paper before marking enough preferences to cast a formal vote a warning is given and an opportunity provided to revise the selections. At the completion of voting a ballot paper is printed in a font that closely resembles handwriting and the voter places the ballot paper in a nearby ballot box.

4.24 Electronically assisted voting for electors who are blind or have low vision was trialled at the 2007 election for the Legislative Council. Only two electors cast votes using the system at the one pre-poll centre where the facility was available.[14]

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12 Victorian Electoral Commission, *Report to Parliament on the 2006 Victorian State election* (2007), pp 66–75.

13 Victorian Government, 'Government response: Electoral Matters Committee inquiry into the conduct of the 2006 Victorian State election', viewed on 8 December 2008 at http://www.parliament.vic.gov.au/emc/Government%20Reponse.pdf.

14 Tasmanian Electoral Commission, *2nd Annual Report 2006-07* (2007), pp 26–27.

Assisted voting in federal elections

4.25 In the absence of electronically assisted voting, electors who are blind or have low vision may seek assistance in completing a ballot paper. Assisted voting is also available to electors who satisfy a polling official that they are 'so physically incapacitated or illiterate that he or she is unable to vote without assistance'.[15]

4.26 Electors requiring an assisted vote may do so with the assistance of a person appointed by the elector. If an elector fails to appoint a person to assist them the officer in charge of a polling place or mobile polling team is required to assist the elector in the presence of scrutineers or another polling official if no scrutineers are present.[16]

4.27 In practice, some electors who are blind or have low vision choose to vote by postal vote, and seek the assistance of friends or relatives in completing the ballot paper. Electors who have low vision and are able to utilise electronic magnification equipment may be able to cast a secret and independent vote using such equipment if it is available.[17]

Overview of the 2007 federal election trial

4.28 The 2007 election trial of assisted electronic voting was limited to 29 locations operating as pre-poll centres for the election across a mix of metropolitan, urban, regional and remote locations (table 4.1).

4.29 The 29 locations used for the trial were open for 14 days in the leadup to the election and on election day. Of the sites used for the trial, only six (Kooyong, Ballarat, Shepparton, Warragul, Geelong and Gilles Plains), were newly-created pre-poll voting centres, having not been used as pre-poll centres in previous federal elections. These were usually in disability service centres where they had not been established previously.[18]

15 *Commonwealth Electoral Act 1918*, s 234.

16 *Commonwealth Electoral Act 1918*, s 234.

17 Frost T, Royal Society for the Blind of South Australia, transcript, 20 August 2008, p 41.

18 Australian Electoral Commission, *Report into Electronically Assisted Voting at the 2007 Federal Election for Electors who are Blind or have Low Vision* (2008), pp 43–44.

Table 4.1 2007 election assisted electronic voting trial locations and votes cast

Location	Jurisdiction	Division	Expected voter numbers	No. of voters who tried to use machines	No. of voters who completed voting using machines
Albury	NSW	Farrer	50-70	12	12
Chatswood	NSW	Bradfield	25-50	18	18
Coffs Harbour	NSW	Cowper	30-60	16	16
Dubbo	NSW	Parkes	25-50	20	20
Enfield	NSW	Lowe	50-70	60	60
Parramatta	NSW	Parramatta	25-50	15	15
Wollongong	NSW	Cunningham	30-60	31	28
Melbourne	Victoria	Melbourne	30-50	50	49
Kooyong	Victoria	Higgins	60-80	118	114
Ballarat	Victoria	Ballarat	60-70	59	56
Shepparton	Victoria	Murray	25-50	9	6
Warragul	Victoria	McMillan	20-35	48	47
Geelong	Victoria	Corangamite	30-50	48	47
Brisbane City	Queensland	Brisbane	30-50	61	61
Brisbane North	Queensland	Lilley	30-70	18	18
Gold Coast	Queensland	McPherson	40-70	6	6
Hervey Bay	Queensland	Hinkler	35-65	15	13
Cairns	Queensland	Leichhardt	40-70	19	19
Perth	WA	Swan	40-70	81	69
Mandurah	WA	Brand	30-50	5	5
Bunbury	WA	Forrest	15-25	11	10
Adelaide	SA	Adelaide	25-50	17	17
Gilles Plains	SA	Sturt	50-70	32	32
Noarlunga	SA	Kingston	10-20	23	23
Hobart	Tasmania	Denison	30-50	15	15
Launceston	Tasmania	Bass	25-40	12	12
Darwin	NT	Solomon	20-40	12	12
Alice Springs	NT	Lingiari	10-25	5	5
Canberra	ACT	Fraser	30-60	45	45
Total			910-1550	881	850

Source *Sheridan and Associates,* Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report *(2008), pp 26–27.*

4.30 A total of 881 electors attempted to vote using the machines and 850 voters successfully completed a vote using the machines. Actual takeup was below expectations, which was estimated to be between 910 and 1,550 voters.[19]

4.31 The cost of the trial was estimated to be $2.2 million (table 4.2). Based on the total cost and number of votes cast, the average cost per vote cast was $2,597.[20] Had voter turnout been at the higher end of expectations (1,550) the average cost per vote would still have been in the order of $1,425 per vote. This compares to an average cost per elector of $8.36 at the 2007 federal election.[21]

Table 4.2 2007 election assisted electronic voting trial estimated costs

Component	Cost ($'000)
Salary	487,409
Operating expenses	1,032,933
Capital	786,861
Total	2,207,203
Special items (included above)	
Communication (a)	213,036
Contractor costs	1,028,092
Audit	36,364

Note *(a) Communication costs are for the formal communication strategy. Additional expenditure was incurred in demonstrating machines — which generate free radio, television and newspaper coverage.*

Source *Australian Electoral Commission*, Report into Electronically Assisted Voting at the 2007 Federal Election for Electors who are Blind or have Low Vision *(2008), pp 61–62.*

4.32 The committee notes that in considering the choice of sites for the trial, the objective of maximising participation was subject to satisfying a range of other criteria:

- At least one centre should be located in each capital city;
- Any other centres should be located in disability service centres where suitable premises are available as these centres are generally located near public transport and the majority of the target group are familiar with them;
- Rural areas should have representation; and

19 Sheridan and Associates, *Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report* (2008), pp 25–26.

20 Australian Electoral Commission, submission 169, p 62.

21 Australian Electoral Commission, *Electoral Pocketbook 2007*, p 73.

- Expected voter turnout should be such that the trial can be adequately evaluated in terms of system suitability and demand.[22]

4.33 The independent evaluation of the trial highlighted the very high level of satisfaction with the electronic voting machines amongst electors who are blind or have low vision who participated in the trial. Overall, 97 per cent of respondents to the evaluation survey were *very satisfied* or *satisfied* with the use of electronic voting machines.[23]

4.34 While only 1.5 per cent of survey respondents expressed that they were *dissatisfied* or *very dissatisfied* with using the electronic voting machines, the independent evaluation noted that these users were:

- likely to be older than average;
- almost half as likely to be a computer user;
- more than 50 per cent more likely to be a screen user;
- likely to spend marginally more time in travel to the location;
- over three times less likely to be satisfied with ease of use of the electronic voting machines;
- less than half as likely to be satisfied with the clarity of the audio instructions;
- less than a third as likely to be satisfied with the clarity of the screen instructions;
- less than half as likely to be satisfied with the usability of the screen; and
- 25 per cent less likely to be satisfied with the privacy that they had in using the electronic voting machine.[24]

Support for the trial

4.35 Submissions to the committee from electors who are blind or have low vision and who had used electronically assisted voting at the 2007 federal election were positive, with many electors reiterating views previously put to the committee of the value that they placed in being able to cast an

22 Australian Electoral Commission, *Report into Electronically Assisted Voting at the 2007 Federal Election for Electors who are Blind or have Low Vision* (2008), p 41.

23 Sheridan and Associates, *Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report* (2008), p 40.

24 Sheridan and Associates, *Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report* (2008), p 43.

independent and secret vote, many for the first time in their lives.[25] A selection of these comments is presented in box 4.1.

Box 4.1 Comments by electors who are blind or have low vision on casting a independent and secret vote at the 2007 federal election

"As a vision impaired person who has an intense interest in politics I was delighted to be able for the first time in my 53 years of life to be able to vote independently and with dignity at the last federal election. This was due to the availability of an electronic voting system designed for use by blind and vision impaired persons."

"This measure provided me with my first opportunity to exercise my right to an independent and secret vote. At previous elections I had been obliged to ask an AEC officer to mark a print ballot paper on my behalf because I am vision-impaired to the extent that I cannot read print or write by hand. I commend the AEC for implementing this initiative. While I had been looking forward to casting a vote for myself for many months leading up to the election, I was nonetheless overwhelmed by the positive and empowering experience of voting. I found the technology used … very easy to use."

"I am a 65-year-old person, totally blind from birth. I have never been able to vote independently - until last year! I am lucky enough to live in one of the constituencies taking part in the trial. I was able to vote completely unaided, once the system had been explained to me. Information material was available in braille, large print and audio. The help function on the computer was excellent."

"As a blind person I would like to applaud Government for taking onboard the trial for electronic voting for the 2007 Federal election it enabled me to vote unassisted for the first time in my voting life. The sense of total independence was liberating."

Source Stewart C, submission 65, p 1; Tyrell S, submission 76, p 2; Nilsson B, submission 80, p 1; Madson G, submission 114, p 1; Fela K, submission 150, p 1.

25 See Stewart C, submission 65; Tyrell S, submission 76, Altamore R, submission 78; Nilsson B, submission 80; Slucki S, submission 105; Chan M, submission 107; Madson G, submission 114; Stillman P, submission 113; Chapman B, submission 140; Fela C, submission 150; Jones M, submission 154.

4.36 The trial was also supported by a number of organisations representing the blind or vision impaired community including Vision Australia, Blind Citizens Australia and the Human Rights and Equal Opportunity Commission.[26] These organisations supported making electronically assisted voting a permanent feature at future federal elections. Blind Citizens Australia noted that:

> Feedback from our members tells us that the opportunity was greatly appreciated by many. We believe that electronically assisted voting should be introduced as a permanent measure with at least one polling booth made accessible in every polling station at the next federal election so that more of the 500,000 Australians who are vision impaired or blind can exercise this critical right.[27]

Voting systems

4.37 While three different existing electronically assisted voting systems had been used at state and territory elections in the ACT, Victoria and Tasmania prior to the 2007 federal election, a different system was developed by the AEC for the 2007 federal election.

4.38 The need for a new system was based on a number of considerations including usability, voting systems (as well as the possibility of the need to accommodate referendum questions) and counting systems.

4.39 A statement of requirements was issued to two contractors who had been involved in developing the Victorian and ACT electronically assisted voting systems. This was done under an abbreviated procurement process that specified a number of features that were different to the systems previously used in these jurisdictions but allowed some flexibility in delivering a solution that met the AEC's requirements including:

- A system that can accommodate full preferential voting for the House of Representatives, proportional representation for the Senate and caters for a referendum if necessary;
- The requirement for a printed ballot paper in barcode format, and the module to decode and print the contents of those barcodes; and
- Hardware which includes but is not limited to the computer or processor itself, a computer screen suitable for vision impaired electors (which may include touch screen capability), an input device suitable

26 Vision Australia, submission 142; Blind Citizens Australia, submission 81; Human Rights and Equal Opportunity Commission, submission 97.

27 Blind Citizens Australia, submission 81, p 2.

for blind and vision impaired voters (including tactile indicators on the device) and headphones.

4.40 The preferred contractor, Software Improvements, was formally awarded the contract on 30 March 2007. Software Improvements had developed the system used in ACT elections.

4.41 The voting system was audited by a contractor accredited with the National Association of Testing Authorities. The contractor was asked to ensure that the voting system met the following criteria:

- Resistant to malicious tampering;
- Free from malicious source code;
- Presents an accurate representation of votes cast in the printed record without gain or loss; and
- Does not allow the association of a voter with the vote cast.[28]

4.42 The audit contractor made the following findings and certified that the voting system complied with the specified criteria:

- that the system design includes features that provide the level of security required by the AEC;
- that the AEC conducted its testing of the electronic voting machine (EVM) with due diligence;
- no evidence was found of malicious source code in the EVM;
- There were no errors detected in tests for security, accuracy and compliance of the system; and
- that risks identified in this report have been avoided or minimised to a level that would allow the EVM to comply with AEC requirements regarding security, accuracy and voting functionality.[29]

28 BMM Australia, *Audit of AEC's electronic voting machine for blind and vision impaired voters* (2007), p. 1.

29 BMM Australia, *Audit of AEC's electronic voting machine for blind and vision impaired voters* (2007), p. 1.

4.43 Some of the key differences between the system used at the 2007 federal election from that provided by Software Improvements at ACT elections included:

- The inclusion of a printer that produced a machine-readable barcode for insertion into a declaration envelope, with no votes recorded on the machine. The declaration votes were then forwarded to the relevant division for decoding and counting. For ACT elections, there is no printed output, with votes stored on the machine;
- As no votes were stored on the machines, votes were counted using paper ballot papers, which were produced at the relevant divisional office using barcode readers. For ACT elections, votes cast electronically are stored on machines and downloaded directly into the count early on election night;
- The use of a telephone-style numeric keypad to enter choices to visual or audio prompts. For ACT elections a numeric keypad is also used, but choices are made by selecting arrow keys, rather than choices being assigned to specific numbers; and
- Only English audio instructions were available. For ACT elections, voters could choose to receive instructions in up to 12 languages.

The future of electronically assisted voting

4.44 It is clear to the committee that there is a strong value placed by some electors who are blind or have low vision on the ability to cast an independent and secret vote.

4.45 The AEC recognises the value of an independent and secret vote to all electors, including those who are blind or have low vision. However, the AEC also noted that:

> The high cost of the trial must be balanced against this important principle. The provision of facilities of this type on a large scale, if not matched by a significant level of take-up, would ultimately give rise to costs which would, in an era of scarce resources, impact on the services provided to other electors.[30]

4.46 There is of necessity a trade off in allowing one group of electors to exercise the same quality of franchise as most of the community and the

30 Australian Electoral Commission, submission 169, p 62.

availability of resources. Compared to an average cost per elector of $8.36 at the 2007 federal election,[31] the average cost per vote of $2,597 for the electronically assisted voting trial is significant given the low levels of participation.

4.47 Some inquiry participants supported a more general rollout of assisted electronic voting:

- Blind Citizens Australia considered that electronically assisted voting should be introduced as a permanent measure with at least one polling booth made accessible in every polling station at the next election;[32]
- Vision Australia noted that the 29 sites used for the 2007 federal election trial constituted only 0.36 per cent of the over 8,000 polling places used at the election and considered that the number of polling places with electronically assisted voting facilities be increased each election until all electorates have at least one polling place which has e-voting capability; and
- The Human Rights and Equal Opportunity Commission considered that electronically assisted voting should be made available in as many locations as possible and at least in every electorate.[33]

4.48 Blind Citizens Australia and the Royal Society for the Blind of South Australia supported moving to on-line voting for all voters, rather than developing specific solutions for blind and vision impaired voters.[34]

4.49 While there appears to be a number of electors who are blind or have low vision who would benefit from assisted electronic voting if it was available, not all of these electors are necessarily going to take advantage of this opportunity.

4.50 Firstly, as electors who are blind or have low vision are more likely to be older, there is likely to be a general and continuing reluctance to use a computer to cast a vote, although this is expected to decline over time.[35] A community educator with the Royal Blind Society for South Australia told the committee that:

> Our client database, for example, shows the average age of our clients is around 78, 79 years of age and, because of that advanced

31 Australian Electoral Commission, *Electoral Pocketbook 2007*, p 73.

32 Blind Citizens Australia, submission 81, p 2.

33 Human Rights and Equal Opportunity Commission, submission 97, p 10.

34 Blind Citizens Australia, submission 81, p 2; Royal Society for the Blind of South Australia, submission 73, p 1.

35 Australian Electoral Commission, submission 169, p 62.

> age, they are predominantly females, because females live longer than males. Everything that I have read in the way of suggested answers to these problems revolves around quite complex technology. If I can use my mother as an example: like myself, she is legally blind. She is well and truly into her 80s. She has never sat in front of a computer in all of her life. If she were to sit in front of a computer, she is unable to see the keyboard, so she is not even able to respond to any audio prompts and things like that.
>
> I would put to the committee that this is the situation of most blind people in this country. Nearly half the people we deal with are over 80 years of age. So when you talk about electronically assisted voting—I am not talking from the organisation here; I will probably get a smack on the wrist for this—personally, I think it is a bit of a nonsense to expect most blind people to sit down and operate a computer in a polling booth.[36]

4.51 Secondly, a significant proportion of people with low vision are able to utilise other lower-cost technologies, such as electronic magnification, to assist them to make an independent and secret ballot.[37] The same representative from the Royal Blind Society for South Australia told the committee that:

> Most people imagine that, in order to call yourself blind, it must follow that you cannot see. Again, this is a very common misunderstanding out there. Most blind people can see. According to the social security system and the medical profession—in fact, according to the World Health Organisation—I am a blind person, but I can see. I am more comfortable with a term like 'partially sighted'. I might meet the standards to be classified as a blind person but, with mobility, I have very few problems. But, again, this is the case with the majority of blind people. When you are talking about the majority of blind people being elderly, obviously they are more frail, more cautious with their movements, less adventurous with their independent movement, and that sort of thing, so there are other factors as well.
>
> … The majority of blind people cannot and do not want to use a computer; in fact, they are totally intimidated by computers. For the partially sighted population, it has been suggested that electronic magnification is a solution, and it is: it is a great

36 Frost T, Royal Society for the Blind of South Australia, transcript, 20 August 2008, p 43.

37 Royal Society for the Blind of South Australia, submission 73, p 2.

> solution. Unfortunately, this equipment costs, for an effective unit, about $4,000.[38]

4.52 Greater availability of electronic magnifiers may be one way that the AEC can facilitate a secret and independent vote for vision impaired electors. The AEC told the committee that:

> For the 2007 election, electronic magnifiers (Closed Circuit TVs) were available at a number of the 29 trial sites. These were either hired or loaned for the trial period, and they were utilised by some electors to cast their votes. Purchasing and storing these machines for a 2 week voting period every three years is not practical, or cost effective. The AEC could consider making this equipment available at more locations in the future, subject to appropriate hire equipment being available, but this technology provides no aid to voters who are completely blind.[39]

4.53 Deployment of electronic magnifiers across the AEC's divisional offices, which operate as pre-poll centres in the lead up to elections, was not considered practicable by the AEC, as divisional offices are not the main point of contact for voters and often had limited available space. The AEC considered that such facilities, which cost in the order of $5,000 each, would be more accessible if they were deployed in the major pre poll centre in a division.[40]

4.54 The committee does not believe that in its current form, and given the low participation levels experienced during the trial, electronically assisted voting for electors who are blind or have low vision provides sufficient benefits to justify the high cost involved in providing this service.

4.55 However, there are a number of proposals that have been put to the committee that appear to provide a more sustainable basis for continuing with a limited form of assisted electronic voting in the future. These will largely rely on maintaining or lowering fixed costs in combination with increasing participation levels.

Uncertainty over fixed technology and service costs

4.56 It appears that most of the costs involved in delivering electronically assisted voting are largely fixed, including the development of the voting software, AEC staffing costs and auditing costs. Variable costs, such as the

38 Frost T, Royal Society for the Blind of South Australia, transcript, 20 August 2008, pp 43–44.

39 Australian Electoral Commission, submission 169.6, p 10.

40 Australian Electoral Commission, submission 169.9, p 2.

number of machines deployed, number of sites, training for polling staff and additional site costs are likely to be relatively low but may be significantly higher than average program costs, particularly in locations where only small numbers of votes are cast.

4.57 The 'trial' nature of electronically assisted voting at the 2007 election and tight timeframes for developing a voting system allowed the AEC to enter into select tender arrangements with service providers. The AEC has indicated that were electronic voting to continue into the future, procurement guidelines would require a lengthy open tender process to be undertaken.[41]

4.58 It is difficult to determine the likely final fixed costs of continuing electronically assisted voting given the uncertainty over the administration costs of running the program within the AEC, the extent of competitive pressures on potential providers and the development and hardware costs as technology changes.

Increasing participation

4.59 While turnout of electors at the electronically assisted voting trial, at 881, was well below expectations, it is clear that increasing participation by even several hundred would have significantly lowered the average cost per vote. For example, had turnout been at the higher end of expectations (1,550 electors), the average cost would have fallen from $2,597 to $1,425 per vote.

4.60 There are two main options for expanding participation — increasing the proportion of electors who are blind or have low vision utilising the voting machines and/or expanding eligibility for participation to include other groups including those with a print disability.

Blind and low vision elector participation

4.61 It is not clear to the committee that an increasing number of electors who are blind or have low vision would use electronically assisted voting if it were to be continued.

4.62 At the 2006 Victorian State election, 199 electors cast a secret and independent vote at one of six pre-poll voting centres using electronically assisted voting. The 2007 federal election trial utilised five of these sites, four of which were Vision Australia premises. While participation at the

41 Australian Electoral Commission, submission 169, p 58.

five sites was up by 41 per cent overall there were also two sites where participation declined (table 4.3).

Table 4.3 Assisted electronic voting for electors who are blind or have low vision: Number of votes cast at the 2006 Victorian state election and 2007 federal election

Location	No. of electronic votes		Increase (per cent)
	2006 state election	*2007 federal election*	
Kooyong Vision Australia	65	114	75%
Melbourne City	31	49	58%
Ballarat Vision Australia	64	56	-13%
Warragul Vision Australia	19	47	147%
Shepparton Vision Australia	14	6	-57%
Total	193	272	41%

Source *Sheridan and Associates*, Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report *(2008), p 34.*

4.63 While the committee understands the desirability of including trial sites in areas with low expected turnout to ensure that the services were offered in areas other than major population centres, the viability of continuing electronic voting is dependent on maximising overall participation by targeting areas where a greater number of electors who are blind or have low vision reside and where there is a high likelihood that they will utilise the facilities.

4.64 The AEC told the committee that if the electronic voting machines were to remain for the exclusive use of voters who are blind or have low vision then, subject to funding, the AEC would recommend that no more than 40 sites in total be considered.[42]

4.65 The contractor's evaluation of the trial noted that one option for increasing participation, particularly in country areas was for 'mobile polling'. Feedback on the trial suggested that in non-metropolitan areas there was a tendency for electors who are blind or have low vision not to travel between population centres.[43]

4.66 The committee understands that this mobile polling proposal would involve some electronically assisted voting machines moving between pre-poll facilities in the election period. Such an option appears to offer some opportunities to modestly increase participation at little extra cost, with the AEC having some flexibility in gazetting pre-poll locations and

42 Australian Electoral Commission, submission 169.9, p 2.

43 Sheridan and Associates, *Evaluation of the electronic voting trial for blind and sight impaired electors at the 2007 federal election: Final evaluation report* (2008), p 65.

the strong likelihood that a more 'portable' electronically assisted voting machine can be developed.

4.67 The experience in Victoria through the 2006 state election and 2007 federal elections demonstrated that where electronically assisted voting was provided to electors who are blind or have low vision at successive elections, only a modest increase in participation was achieved. It is not clear to the committee that electronically assisted voting can be sustained with these low levels of participation.

4.68 Further, there is no indication, apart from Victoria and the ACT, that electronically assisted voting will be provided by other jurisdictions in the near future. In NSW for example, a parliamentary committee examining the conduct of the 2007 state election did not support the implementation of electronically assisted voting at this stage, instead recommending that the NSW Electoral Commission further examine possible options.[44]

Extension to other print disability electors

4.69 The AEC noted that widening the eligibility criteria to include any voter who requires assistance with printed format or who may be regarded as print handicapped was a possible way of increasing participation to lower the cost per vote. To achieve this, the voting machines would need to be enhanced in order to operate as 'audio assisted' or 'accessible voting' machines.[45]

4.70 Vision Australia supported extending eligibility to a range of other groups in the community such as people with other disabilities, including those with a print disability, people with cognitive or neurological impairment, or with language barriers.[46]

4.71 The Human Rights and Equal Opportunity Commission supported removing restrictions on eligibility, noting that print disability was not restricted only to those who are blind or have a vision impairment, but also included:

- Australians who cannot complete a secret ballot using pencil and paper by reason of physical disability; and
- people who (by reason of intellectual or learning disabilities, or other language or literacy difficulties) cannot effectively use written

44 NSW Parliament Joint Standing Committee on Electoral Matters, *Administration of the 2007 NSW election and related matters* (2008), pp 43–44.

45 Australian Electoral Commission, submission 169, p 62.

46 Vision Australia, submission 142, p 3.

instructions in completing a ballot paper, but could have effective access to a secret and independent ballot through being able to have their input read back to them electronically.[47]

4.72 In addition to allowing groups with a print disability the opportunity to cast a secret and independent vote, the in-built feature of the electronically assisted voting machines that provides a warning to electors if their choices would result in an informal vote being cast provides an opportunity to address high rates of informality.[48]

4.73 Broad estimates of the incidence of print disability suggest that around 47 per cent of Australian adults have poor literacy skills so that tasks such as reading bus timetables and filling in forms would be difficult.[49] While this indicates that there is potentially a large group of electors that could benefit from electronically assisted voting, it is difficult to determine their likely uptake of electronically assisted voting. Potential electors are likely to be relatively dispersed and may be reluctant to utilise such facilities even if they were made available.

4.74 The AEC told the committee that if eligibility were to be extended to electors with a print disability then, subject to funding, it would support up to 20 additional sites for electronically assisted voting in locations yet to be determined, depending on the demographics of the target audience.[50]

Committee conclusion

4.75 The strong value placed by some electors who are blind or have low vision on their ability to cast a secret and independent vote is recognised by the committee. The ability to cast secret and independent votes in this way should be facilitated where practicable.

4.76 That said, electors who are blind or have low vision are still able to cast a vote at an election with the assistance of a person of their choosing. An assisted vote, whilst not a secret and independent vote, still allows electors who are blind or have low vision to participate in the electoral process.

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47 Human Rights and Equal Opportunity Commission, submission 97, p 9.

48 Registries and Everyone Counts, submission 160, p 2; Software Improvements, submission 138, p 19.

49 Department of Education, Science and Training, 'Snapshot', viewed on 16 December 2008 at http://www.dest.gov.au/NR/rdonlyres/1CD7627F-79A0-4988-B168-60A9F1BB549B/16532/AlmosthalfofAustralianshaveliteracyskillsetc.pdf.

50 Australian Electoral Commission, submission 169.9, p 2.

4.77 The current cost of delivering electronically assisted voting for electors who are blind or have low vision, at $2.2 million or $2,597 per vote, compared to an average cost per elector of $8.36 at the 2007 federal election, appears to be unsustainable especially given the low participation in the trial.

4.78 Given the lack of adoption of electronically assisted voting for people who are blind or have low vision by state and territory electoral authorities, it is not clear that there will be any momentum generated to lift participation levels to a more sustainable basis. While extending eligibility to electors with a print disability appears to provide some opportunity to increase participation in electronically assisted voting, the committee is not convinced that this can be done in a way that will drive average costs down to sustainable levels.

4.79 The committee therefore does not consider that electronically assisted voting for electors who are blind or have low vision should be made a permanent feature of federal elections at this time.

Recommendation 4

4.80 **Given the high average cost per vote of $2,597 for electronically assisted voting compared to an average cost per elector of $8.36 at the 2007 federal election and a concern that participation will not increase to sustainable levels, the committee recommends that electronically assisted voting for electors who are blind or have low vision should not be continued at future federal elections.**

4.81 The Commonwealth Electoral Act provides that electors who require an assisted vote may do so with the assistance of a person appointed by the elector. In practice, some electors who are blind or have low vision choose to vote by postal vote, and seek the assistance of friends or relatives in completing the ballot paper. Electors who have low vision and are able to utilise electronic magnification equipment may be able to cast a secret and independent vote using such equipment if it is available.

4.82 The committee recognises that for some electors who have low vision, casting a secret and independent vote could be achieved using aids such as electronic magnifiers. The committee considers that electors who have low vision may benefit from the provision of such alternate facilities in accessible locations and should be able to do so where practicable.

Recommendation 5

4.83 **Assisted voting provisions in the *Commonwealth Electoral Act 1918* give people who are blind or have low vision the opportunity to seek assistance from a person appointed by them in casting a vote at federal elections and referenda. Electors who have low vision may benefit from the provision of electronic magnifiers. The committee recommends that the government provide sufficient resources to the Australian Electoral Commission for the deployment of electronic magnifiers at sites where there is likely to be demand from electors who have low vision.**

Daryl Melham MP
Chair
10 March 2009


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