REPORT OF THE Chief Electoral Officer of Canada

Following the Pilot Project on the Use of an Assistive Voting Device in the November 29, 2010, By-election Held in Winnipeg North

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Report of the Chief Electoral Officer of Canada following the pilot project on the use of an assistive voting device in the November 29, 2010, by-election held in Winnipeg North

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Executive Summary

Elections Canada offers a range of services to facilitate voting by electors with disabilities. However, the available services do not always permit electors with certain disabilities to vote without assistance and in secrecy, as other electors.

In accordance with section 18.1 of the *Canada Elections Act*, with the approval of parliamentarians, the agency conducted a pilot project of an assistive voting device (AVD) for use by persons with disabilities in the November 29, 2010, by-election in Winnipeg North. The objective was to assess whether this technology would be a viable option allowing electors with disabilities to cast their ballot independently and in secrecy. The agency would then evaluate the feasibility of large-scale implementation in a future general election.

Elections Canada conducted a preliminary assessment and issued a request for proposals for a device to be piloted during a federal by-election. The agency organized a comprehensive, multi-faceted communications and outreach campaign for the pilot, with three objectives: to build public awareness of the AVD; to engage organizations representing electors with disabilities and reach potential users; and to evaluate the campaign and gather feedback.

The AVDs were placed at advance polls, the local Elections Canada office and seven central polling sites on voting day. At the sites where the device was available, 25 people said that they required assistance to vote. Of these, five electors opted for the device.

Elections Canada gathered feedback from AVD users, obtained comments from election workers, held a post-election meeting with organizations representing electors with disabilities and conducted a post-election survey of electors in Winnipeg North.

The pilot project allowed Elections Canada to conclusively evaluate the merits of the AVD and, from that point of view, was a success. From the information gathered, Elections Canada found that the AVD used in the Winnipeg North by-election was not a practical solution enabling electors with disabilities to vote independently and in secrecy. There were also significant operational challenges involved in deploying the device.

The agency has concluded that it will not proceed further with this device, but will continue to study additional methods that could facilitate voting for electors with disabilities. In the meantime, Elections Canada will continue to offer those electors a wide range of services.

Introduction

Close to 4 million Canadian electors are estimated to have disabilities. According to 2006 data from Statistics Canada, over 2.9 million Canadians have reduced mobility and nearly 800,000 have a visual impairment. Canada has a duty to accommodate the needs of these electors, allowing them to vote independently while preserving the secrecy of their ballot. It is a duty that arises not only as a result of community expectations but also from obligations under Canadian and international law:

- The Canadian Charter of Rights and Freedoms sets out the right of all citizens to vote in federal elections and prohibits discrimination on the grounds of disability.
- The *Canadian Human Rights Act* sets out the obligation to refrain from discrimination in the provision of services generally available to the public such as elections as well as the duty to accommodate persons with disabilities.
- Canada has signed and recently ratified the United Nations Convention on the Rights of Persons with Disabilities. As a State Party, Canada has undertaken to protect the right of these persons to vote by secret ballot in elections and public referendums, and to facilitate "the use of assistive and new technologies where appropriate" (article 29).

The Canada Elections Act contains provisions to facilitate voting by persons with disabilities in federal elections and referendums. Elections Canada offers a range of services to such persons (see box). However, the available services do not always permit electors with certain disabilities to vote without assistance. Elections Canada is committed to enhancing accessibility for all electors with disabilities.

Examples of Elections Canada Services for Electors with Disabilities at Polling Sites

- A voting template to help persons with visual impairments mark their ballot
- A large-print list of candidates
- Sign-language interpretation on request
- Assistance from an election officer, a friend or a relative in marking the ballot

Pursuant to section 18.1 of the *Canada Elections Act*, in fall 2010, Elections Canada received approval from the Standing Senate Committee on Legal and Constitutional Affairs and from the House of Commons Standing Committee on Procedure and House Affairs to conduct a pilot project testing an electronic assistive voting device (AVD) for use by electors with disabilities in the November 29 by-election in Winnipeg North.

This was the first time that Elections Canada organized and conducted a pilot project requiring the approval of parliamentarians for the purpose of testing electronic voting systems. The conduct of pilot projects for that purpose is authorized since 2000 under the *Canada Elections Act*. For the pilot project, the agency carefully noted the recommendations made by the Senate committee. This report responds to those recommendations, as well as the recommendation of

the Standing Committee on Procedure and House Affairs that the AVD be placed in areas visited by a large number of electors.¹

This technology has already been used elsewhere. Nevertheless, it is essential to test such a process in a federal context to demonstrate to all stakeholders – Elections Canada as well as election administrators in the regions, electors, candidates and parliamentarians – that the new electronic device can be a useful tool, integrating well into the voting process established by the *Canada Elections Act*.

For example, it is necessary to ensure that the federal election calendar allows for the electronic device to be programmed and verified before it is deployed for advance polls, taking into account the time frame between the close of nominations and the first day of advance voting; that there is sufficient staff at polling sites to ensure smooth conduct of the vote; that an appropriate communications strategy is put in place to make targeted electors aware of this voting option; that the secrecy of the vote is preserved, notably with respect to the random mark left by the device and the ballot-handling procedure used by the election officer who operates the device; and finally, that the voting process meets electors' needs.

Elections Canada chose Winnipeg North for the pilot project because it was the first electoral district for which a House of Commons seat became vacant in the time period when the agency was ready to test assistive voting technology. In addition, the riding location provided the opportunity to engage with national and local groups based in Winnipeg that represent people with disabilities.

This report sets out Elections Canada's objectives and experiences under the pilot project. It explains what an AVD is and describes the particular type of device used in the pilot. It summarizes the communications and outreach campaign mounted by Elections Canada for the pilot project. It describes the actual use of the AVD in the by-election. It presents the feedback collected from various sources concerning this device and gives a breakdown of the costs of the pilot project. Last, it presents Elections Canada's conclusion and next steps.

¹ The recommendations from the Senate and House committees, and Elections Canada's response to them, have been summarized and presented in the annex.

I. Objective of the Pilot Project

The objective of the pilot project was to determine how well a particular AVD could be integrated into the federal electoral process and whether it met the needs of users. The pilot was a first step in evaluating the AVD. If the results of the pilot project were positive, Elections Canada's next step would be to conduct a cost-benefit analysis to evaluate the feasibility of large-scale implementation in a future general election. The analysis would take into account the implementation experience of other jurisdictions. Stakeholders in the electoral process would be consulted to assess the impact of this technology on Elections Canada's accessibility objectives and to compare the impact with that of other initiatives, such as Internet voting.

Elections Canada established success criteria to evaluate the pilot (see Table 1).

Table 1 - Success Criteria for the Assistive Voting Device Pilot Project

To what extent were electors aware of the AVD pilot?

To what extent were users of the AVD satisfied with their independent voting experience?

Of electors requiring assistance, how many used the AVD?

What was the average time spent by an elector in using the AVD to vote?

In the use of the AVD, were any incidents observed that could have jeopardized the integrity or secrecy of the voting process?

Were there any problems with the deployment (logistics) of the AVDs?

Did the election calendar allow for the AVDs to be programmed and verified before they were deployed?

How much did use of the AVDs cost (all costs itemized, including training, outreach, etc.)?

2. Description of the Assistive Voting Device Used in Winnipeg North

An AVD is a piece of electronic equipment that allows an elector with a visual impairment or limited dexterity to mark a ballot independently and in secrecy.

Such devices have been used in provincial and municipal elections in Canada. Table 2 provides details of the use of AVDs by other Canadian jurisdictions, as called for by the Senate committee in its recommendations.

Table 2 - Use of Assistive Voting Devices in Other Jurisdictions in Canada			
Jurisdiction	Experience	Planned future use	
	nce of other jurisdictions is of interest, but it is not fully comions Canada. In many cases, these jurisdictions have not gath		
New Brunswick Municipal and	May 2008 municipal elections. AVD coupled with a vote tabulator used in a number of returning offices.	Status quo	
provincial elections	September 2010 provincial election. AVD coupled with a vote tabulator deployed in every returning office and satellite office.		
	Number of users: not known.		
Ontario Provincial elections	March 2009 by-election, Haliburton–Kawartha Lakes–Brock. AVD coupled with a vote tabulator tested in all 9 advance polls and in the returning office.	Planned to be deployed in every returning office and additional returning	
	Number of users: 9. September 2009 by-election, St. Paul's. AVD coupled with a vote tabulator tested in the returning office only during the advance polls.	office in the upcoming provincial election (approx. 140 machines).	
	Number of users: 2.		
Municipal election, Ottawa	October 2010 municipal election. AVD coupled with a vote tabulator deployed at all advance polls and on voting day in seniors' residences and long-term care facilities.	Not known	
	Number of users: not known.		

Table 2 - Use of Assistive Voting Devices in Other Jurisdictions in Canada			
Jurisdiction	Experience	Planned future use	
Ontario (cont.) Municipal	October 2010 municipal elections. AVD coupled with a vote tabulator deployed in various circumstances.	Not known	
elections, various	Number of users: not known.		
	Municipalities: Toronto, Mississauga, Burlington, Kawartha Lakes, London, Markham, Midland, Oshawa, Peterborough, Port Hope, Prince Edward County, Quinte West, St. Catharines, Thunder Bay, Vaughan, Whitchurch– Stouffville, Windsor.		
Manitoba Municipal	October 2006 municipal election, Winnipeg. AVD coupled with a vote tabulator used at advance polls.	Not known	
elections, Winnipeg and Brandon	October 2010 municipal elections, Winnipeg and Brandon. AVD coupled with a vote tabulator.		
	Number of users: not known.		

Where vote counting is automated, AVDs have been used in conjunction with a vote tabulator. Since vote counting in federal elections is manual, Elections Canada has been interested in the devices for the sole purpose of offering an additional service to electors with disabilities – one that would enable them to vote independently and in secrecy.

Through a competitive procurement process, Elections Canada selected Dominion Voting Systems to supply AVDs on a rental basis for the Winnipeg North by-election. The supplier had to meet three primary requirements:

- The device had to have been developed with the participation of disabilities organizations
 and people with different abilities, and the company had to provide examples of the device's
 successful use.
- The technology had to be able to accept regular ballots printed by Elections Canada, which
 would then be indistinguishable from and counted in the same way as other ballots cast in
 the by-election.
- The device needed to enable electors with disabilities to vote independently and in secrecy.

The device used in the Winnipeg North by-election provided the following accessibility features, making it suitable for electors with visual impairments or limited dexterity:

- a tactile controller with Braille buttons
- a sip-and-puff attachment that allowed voters to select options using their breath
- rocker paddles
- audio with volume and speed control for hearing choices through headphones
- a high-contrast screen with text that could be enlarged

The AVD had an audio and/or visual review function that allowed electors to confirm their choice of candidate before printing the ballot. It was also compatible with cochlear implants.

To cast a ballot using the AVD, electors first selected the language and accessibility features they wanted to use. The device provided visual and/or audio instructions.

When the elector was ready, the device displayed and/or spoke the candidates' names. The elector then used the input method of his or her choice to select a name. The device displayed and/or spoke the name of the elector's chosen candidate, giving the elector an opportunity to confirm the selection.

In response to the Senate committee's recommendation, Elections Canada ensured that the vocabulary employed in the device's audio program was as simple and straightforward as possible.

A printer attached to the AVD marked a regular ballot, which was then placed in the ballot box. The device did not store information or count votes.

At the close of polls, officials followed Elections Canada's usual process to count ballots. Ballots marked by the device were indistinguishable from those marked by hand.



High-contrast screen



Sip-and-puff



Rocker paddles



Tactile controller

3. Informing and Engaging Electors and Organizations

For the pilot, Elections Canada organized a comprehensive, multi-faceted communications and outreach campaign, with three objectives:

- to build public awareness of the AVD
- to engage organizations representing electors with disabilities and reach potential users
- to evaluate the campaign and gather feedback on the device

This section discusses the work done to generate awareness and engagement. Section 5 deals with evaluation and feedback.

Building public awareness

The agency placed advertisements and distributed messages in newspapers. For radio, it prepared a 30-second spot. For the Internet, it ran a Web banner on abilities.ca, the Web site of the Canadian Abilities Foundation. It also used direct mail and brochures. The campaign included a public service announcement on the phone-in line for Handi-Transit, a Winnipeg public transit service for persons with disabilities. Elections Canada distributed a reminder brochure to each household in the riding, mentioning that AVDs would be available in the by-election. A postcard sent to approximately 9,200 households also alerted electors to the availability of an AVD at their polling site.

The agency produced a wide range of communications products, including a how-to video with closed captioning, a backgrounder in large print and Braille, audio files for the visually impaired, a half-page print announcement and a promotional brochure in large print. The materials produced were available in multiple formats and distributed in person at public events or by regular mail. They were also available on a special Elections Canada Web page explaining the AVD. The page is located at www.elections.ca under Elections > Past Elections > Winnipeg North, November 29, 2010 > Assistive Voting Device Pilot Project.

A regional media relations advisor stationed at the local Elections Canada office provided information to local journalists and demonstrations of how the AVD worked. The agency issued news releases on the pilot project two weeks and again one week before polling day.

Elections Canada's community relations officers distributed close to 7,500 large-print brochures in community centres, pharmacies, medical clinics, bingo halls, seniors' facilities, grocery stores, churches and other locations likely to attract people who might want to use the AVD. The officers also organized kiosks in shopping malls and community centres, where electors could see and use the device and obtain brochures about the pilot. A help in establishing ties with the community was the ability of some community relations officers to speak various heritage languages.

Engaging organizations representing electors with disabilities, as well as other stakeholders

Elections Canada worked closely with the Council of Canadians with Disabilities throughout the pilot project. The Council provided advice and reviewed communications products and messaging to ensure that the approach was inclusive and appropriate. With the Council's assistance, Elections Canada also engaged with members of some 15 organizations representing persons with disabilities. They included the following:

- People First of Canada (Manitoba chapter)
- the Manitoba League of Persons with Disabilities
- the Canadian Paraplegic Association
- Community Futures Manitoba
- the Alliance for Equality of Blind Canadians
- the Canadian Council of the Blind
- the Manitoba Deaf Association

At a town hall forum for organizations representing the disabled community, Elections Canada introduced the AVD, offered electors an opportunity to try the device, and received feedback on its functionality. The agency provided communications packages about the pilot project, and invited attendees to distribute the information and promote the device in their community.

The agency engaged political parties and candidates as well. In June 2010, Elections Canada provided a demonstration of the AVD at the annual general meeting of the Advisory Committee of Political Parties, held in Ottawa. In an October 29 conference call on the by-election, the Chief Electoral Officer presented the objectives of the pilot project. In addition, at a meeting with the Winnipeg North returning officer, the agency demonstrated the device for candidates in that riding's by-election and gave them the opportunity to try it out. Candidates were also provided with communications materials for distribution.

4. Implementation of the Assistive Voting Device in the By-election

The AVDs used in Winnipeg North were designed for persons with visual impairments or limited dexterity (see Section 2).

The devices were placed in locations serving a significant number of electors – that is, at all advance polls, the local Elections Canada office, and seven central polling sites on voting day serving 35 percent of the electorate in Winnipeg North. Transfer certificates were available for electors at other polls who might wish to use the device.

The deployment, installation and operation of the AVDs required significant human resources investments. Several Elections Canada staff members received training to act as AVD attendants at polling sites, and were flown to Winnipeg for advance and ordinary polling days. Special ballot coordinators appointed by the returning officer performed this function at the local Elections Canada office. Dominion Voting Systems staff members were on site to set up the equipment and provide technical support.

When electors arrived at advance or ordinary polling sites, the information officer greeted them and directed them to the appropriate deputy returning officer, who asked every elector if he or she required assistance. Electors who indicated that they required assistance could choose to use the AVD or another of the services offered to help make voting accessible (see box, p. 7). Electors who decided on the AVD were accompanied to the device. They had the option to bring a friend, family member or other observer, as recommended by the Senate committee.

The AVD attendant provided basic instructions and confirmed the interface that the elector would prefer to use during the voting session. The attendant remained available to assist the elector or answer questions, if required. Electors were informed that they would hear the entire list of candidates, as recommended by the Senate committee, but they could select the candidate of their choice at any time. The device confirmed the name of the selected candidate before the ballot was printed. Electors could change their choice of candidate at that time.

When it came out of the printer, the marked ballot was refolded under a secrecy box in such a way as not to reveal the elector's voting choice. The elector was then accompanied back to the deputy returning officer so that the ballot could be placed in the ballot box and counted according to the usual process.

At the sites where an AVD was available, 25 people said that they required assistance to vote. Of these, five electors opted for the device – three during advance polls and two on ordinary polling day. All the electors who chose the AVD had a visual impairment and used the device's manual "audio-tactile" interface. No electors used the device during the 10-day period that it was available at the local Elections Canada office.

Twenty of the 25 electors who requested assistance chose other voting methods. One used a template, while 19 requested assistance to mark their ballot or else referred to the large-print ballot in the polling site when voting.

5. Feedback, Costs and Findings

Elections Canada focused primarily on feedback from voters, election workers and representatives of electors with disabilities to conduct its evaluation. It also conducted a survey of electors following the by-election to validate the level of awareness regarding the availability of the AVD.

As indicated earlier, this feedback was used to draw conclusions based on the criteria of awareness, user experience, extent of use, integrity, operational effectiveness and usefulness (see Table 1).

Feedback from assistive voting device users

Elections Canada gathered information from voters as they were using the AVD. Of the five electors who used the device, four were satisfied with their experience. Two of the five preferred to have the assistance of a family member, who validated their vote. All five required assistance while using the device. Most encountered difficulty following the system's instructions and saw a need for improvements in system functionalities.

One elector expressed reluctance to use the device in the future, finding it too slow. It took approximately 10 minutes for each elector to vote using the device. Three potential users decided against the AVD because they were in a rush.

Comments from election workers

Many electors who came to vote at the polls were offended at being asked whether they required assistance. Election officers had to explain why they were asking the question. Some deputy returning officers stopped asking it.

The AVD presented a number of challenges to election workers. An issue at several polling sites and the returning office was space configuration and the set-up of the device. The device screen had to be in a position that ensured secrecy. At the same time, there had to be an electrical outlet nearby as well as sufficient room for electors using wheelchairs.

There was a very narrow window of time between the issuing of the list of confirmed candidates, 19 days before election day, and the configuration and deployment of the equipment in the returning office, which the agency had set for 15 days before election day. Within this time many tasks had to be completed, including the production of sound files of candidate and party names, testing and sealing of the device, shipping of the device from Toronto to Winnipeg and training of AVD operators.

While there was sufficient time to program the audio file with the list of candidates before advance voting began on the 10th day before election day, the delivery of the devices to these sites the day they opened, their installation and their testing within a short time frame proved to be a challenge. The devices also had to be removed promptly at the close of polls.

Feedback from stakeholders

The agency held a post-election meeting with organizations representing electors with disabilities. For the meeting, it invited groups that had taken part in the pre-election town hall forum as well as other national organizations. Overall, the groups felt that this was not the right device, but that the pilot project was a step in the right direction by Elections Canada toward improving the accessibility of the electoral process and that it should explore other options.

Post-event survey

In its surveys following the November 29 by-elections, Elections Canada asked Winnipeg North electors whether they were aware of the AVD pilot project. Of the 451 respondents, 26 percent remembered hearing about the availability of an AVD for electors with disabilities. Of these, 55 percent had heard about it through television and newspapers; 14 percent read about it in a brochure, postcard or pamphlet; 11 percent heard about it when they voted; and 9 percent heard about it through the radio.

Costs

The following table provides costs related to the implementation of the pilot project. The costs include deployment of the equipment and provision of a number of services by Dominion Voting Systems. It is important that the costs of a pilot project in a single electoral district not be extrapolated to a general election conducted in 308 electoral districts. In a general election, these technical support services would have to be delivered according to a different, cost-effective business model. Costs are naturally a concern but are not the determining factor in the provision of an assistive voting service, since the rights of electors are at stake.

Table 3 - Cost of the Assistive Voting Device Pilot Project			
Item	Cost (\$) excl. HST		
1. Deployment of AVDs			
 Rental, shipping, set-up of AVDs and training of staff 	\$29,700		
 Contractor travel expenses for AVDs 	\$12,438		
 Production of audio files (.wav files) / Recording of list of candidates 	6,466		
 Purchase of custom French overlay for audio-tactile device 	2,102		
2. Elections Canada in Ottawa – Staff and travel expenses	37,460		
3. Communications	55,356		
4. Supplies, shipping and printing	1,273		
Total cost	\$144,795		

Findings

The experience of organizing and conducting a pilot project during an electoral event has confirmed the value of testing a service model for electors before making recommendations for legislative changes. A pilot project improves Elections Canada's ability to provide operational feedback on its effectiveness and engages organizations representing affected electors in the process. Elections Canada will certainly make use of this model in future to test other electronic voting methods, with the approval of parliamentarians.

The agency has concluded that the type of AVD used in the pilot project in Winnipeg North is not a solution that lends itself to electoral events held at the federal level.

Elections Canada will therefore not proceed further with analysis of this device. Other solutions may better serve electors.

Given these findings, Elections Canada has decided not to proceed with a business case to determine the costs of using this device in a general election and the implications of using this technology over the next five years, as requested by the Senate committee. Elections Canada agrees that these are fundamental questions that it would pursue rigorously, were the agency to propose extending the use of assistive voting technologies to federal general elections.

6. Next Steps

While the optimal solution has not yet been identified, Elections Canada is committed to making it easier for persons with disabilities to vote independently and in secrecy. The agency will continue to seek additional methods that facilitate voting for these electors. The search will involve pursuing the dialogue that has already been initiated with organizations representing persons with disabilities. It will also involve further research on technological methods that may better meet the particular needs of these electors, such as registration and voting over the Internet.

In the meantime, Elections Canada will continue to offer electors with disabilities a wide range of services. They include:

- level access or, if it is not available, the use of a transfer certificate enabling an elector to vote at a nearby polling station with level access
- sign-language interpretation at polls, if requested
- a large-print list of candidates
- a template embossed with Braille and Arabic numerals that fits on top of the ballot
- assistance from an election officer, a friend or a relative
- assistance for electors confined to bed in a seniors' residence or a chronic care facility
- the possibility to vote from home or by mail

A full list of these services appears on the Elections Canada Web site at www.elections.ca under Voters > Backgrounders on the Electoral Process > Accessibility of the Electoral System.

The comments and recommendations of parliamentary committees regarding this pilot project will be of assistance for the development of future pilot projects as Elections Canada seeks to determine which alternative voting methods can best assist electors with disabilities to vote independently and in secrecy.

Annex: Elections Canada's Response to the Recommendations of the Senate and House Committees

Legal and Constitutional Affairs	Committee on
Committee recommendation (summarized)	Elections Canada's response

of the Standing Senate Com

That prior to the Winnipeg North by-election, Elections Canada ensure that those who use the audio program of the AVD are required to hear the names of all candidates on the ballot before being allowed to select their candidate.

Electors were informed that they would hear the entire list of candidates, as recommended by the Committee, but could select the candidate of their choice at any time. This ensured that they were afforded the same opportunities as other electors.

- That when the AVD is used by a visually impaired voter during the by-election, such voters be allowed to bring a friend, family member or other observer up to the device with them, to watch the elections officer fold the marked ballot before placing it in the ballot box.
- Electors had the option to bring a friend, family member or other observer, as recommended by the Committee.
- 3. That prior to the by-election, Elections Canada take steps to ensure that the vocabulary used in the AVD's audio program is as simple and straightforward as possible.
- In response to the Committee's recommendation, Elections Canada ensured that the vocabulary employed in the AVD's audio program was as simple and straightforward as possible.

Note to Recommendation 4:

- The Senate committee has included sub-recommendations for Elections Canada to provide information on AVD costs and performance metrics in other jurisdictions, cost estimates for the device in a general election, and the implications of using this technology over the next five years – in essence, to build a business case for changing the electoral process.
- As noted earlier, while other electoral jurisdictions have used AVDs, they did not necessarily track usage by
 electors with disabilities. Consequently, the information available is of doubtful comparative value.
- The fundamental questions raised by the committee will need to be addressed with full rigour, should the agency ever propose extending the use of assistive voting technologies to federal general elections. However, given the results of the pilot project, the agency does not recommend such an extension and has chosen not to invest further efforts and resources into building a business case in that area.
- 4. That the Chief Electoral Officer report back to the Committee within three months after the by-election, with information on:

Recommendations of the Standing Senate Committee on Legal and Constitutional Affairs

Committee recommendation (summarized)	Elections Canada's response
other devices or voting methods comparable to the one tested in the by-election that might be more efficient and cost-effective	In most cases, these data are not readily available or comparable. Table 2 of the report provides the information gathered to date.
	Some jurisdictions are implementing Internet or telephone voting, which could reduce barriers for electors with disabilities. Elections Canada is planning an Internet voting pilot for a by-election called after 2013, which will require prior approval from parliamentarians.
how well the AVD used in the by-election or any similar device performed	The pilot project demonstrated that the AVD did not meet Elections Canada's requirements; as such, comparison with other jurisdictions is of limited value.
costs associated with this or similar devices	Information is not readily available for most jurisdictions, nor is it itemized along the lines requested.
 the number of users of this or a similar device in past provincial or municipal electoral events 	Information is not readily available as, generally, jurisdictions did not track use by disabled electors.
 the number of individuals with disabilities who used the AVD in the Winnipeg North pilot project 	Five electors used the device. See Section 4.
 details of the communications strategy used by Elections Canada in the by-elections 	A comprehensive, multi-faceted communications and outreach campaign was implemented. See Section 3.
 whether Elections Canada believes the AVD pilot project to have been a success, the metrics used to measure its success, and a cost-benefit analysis of the pilot project 	Based on feedback from voters, election workers and representatives of individuals with disabilities, Elections Canada has concluded that the type of AVD used in the pilot project in Winnipeg North is not a solution that lends itself to federal electoral events and does not meet the expectations of electors with disabilities.
any research conducted or relevant statistics	Representatives of individuals with visual or other impairments are increasingly insisting on their right to vote independently while preserving the secrecy of their ballot. However, there is a lack of evidence-based research evaluating the effectiveness of existing mechanisms in place to assist voters with disabilities, including statistics on the need for an AVD.

Recommendations of the Standing Senate Committee on Legal and Constitutional Affairs	
Committee recommendation (summarized)	Elections Canada's response
the cost of the next general election	The cost of the 41st general election is estimated at \$290 million.
 the estimated costs of using the AVD in the next general election 	Should an initial evaluation indicate that a technological solution meets Elections Canada's
the implications of using this technology over the next five years	requirements, this would be addressed during the preparation of a business case.

Recommendation of the Standing Committee on Procedure and House Affairs	
Committee recommendation (summarized)	Elections Canada's response
That the AVDs be placed in areas visited by a large number of electors	The AVDs were placed in locations serving a significant number of electors – that is, at all advance polls, the local Elections Canada office, and seven central polling sites on voting day serving 35 percent of the electorate in Winnipeg North. Transfer certificates were available for electors at other polls who might wish to use the devices. See Section 4.