

Speaker's Commission on Digital Democracy – Inquiry into Electronic Voting

Electoral Commission Response

10 October 2014

The role of the Electoral Commission

The Electoral Commission is an independent body set up by the UK Parliament. Our aim is integrity and public confidence in the democratic process. Our objectives are:

- Transparency in party and election finance, with high levels of compliance.
- Well-run elections, referendums and electoral registration.

Our principles for free elections that support a healthy democracy are:

- **Trust:** people should be able to trust the way our elections work.
- **Participation:** it should be straightforward for people to participate in our elections, whether campaigning or voting; and people should be confident that their voice counts.
- **No undue influence:** there should be no undue influence in the way our elections work.

This submission sets out the Commission's views on the use of electronic voting (e-voting) at elections, as well as our wider thoughts on electoral modernisation.

Previous UK Government electoral pilot scheme programme

Between 2000 and 2007, the UK Government encouraged local authorities in England to undertake electoral pilot schemes testing new methods of voting, including e-voting and electronic counting (e-counting). Various forms (and combinations) of e-voting were piloted, including:

- Remote e-voting, using the internet, touchtone telephones, text messaging and digital TV, available either on or in advance of polling day.
- E-voting at supervised locations, including the use of kiosks at traditional polling stations or other public places (e.g. libraries, supermarkets, Town Halls), available either on or in advance of polling day.

- Electronic polling stations, enabling electors to vote at any polling station within the local authority area on polling day using networked laptops.

The pilots programme also tested a range of e-counting solutions, using commercially available scanners and hardware, with bespoke software solutions.

The Commission evaluated all of the pilot schemes since 2002, as required under the Representation of the People Act 2000.¹ Our general conclusions were that e-counting has the potential to increase both the efficiency and accuracy of the counting process and that e-voting increased convenience for voters.² However, we made a number of recommendations:

- Any future e-voting or e-counting projects needed to be based on more substantial testing of the security, reliability and transparency of proposed solutions, either through an accreditation and certification process, or a more detailed and thorough procurement process.
- Sufficient time must be allowed for the planning of e-voting and e-counting projects.
- No further e-voting or e-counting pilots should be undertaken until:
 - The UK Government has put in place a comprehensive electoral modernisation strategy, setting out how the wider use of technology in elections will ensure the achievement of transparency, public trust and cost effectiveness.
 - Individual electoral registration has been implemented in Great Britain.

No pilot schemes were undertaken after 2007, although the UK Government did ask as part of a wider consultation on weekend voting in 2008 whether advance e-voting might be introduced as a complement to weekend voting. The Government published its conclusions in March 2010, acknowledging that people had concerns about security, transparency and cost-effectiveness of remote e-voting. They recommended that the area be kept under review.

We want the Government to bring forward proposals for a comprehensive electoral modernisation strategy, setting out how the wider use of technology in elections will ensure the achievement of transparency, public trust and cost effectiveness. We have been calling, since 2007, upon both the current and previous Governments to conduct a comprehensive electoral modernisation strategy and this remains a priority for the Commission; such an initiative is now both practical and timely. This strategy could draw upon the important ongoing work of the Law Commissions in reviewing election law⁷, but also build upon the introduction of Individual Electoral Registration (IER).

The demographic and technological context for engagement and participation in elections is also rapidly changing – with lower registration levels and turnout among younger electors, and greater expectation that public services can be accessed online. The Commission recognises that those who administer elections have a

¹ Local authority electoral pilot schemes (including a few e-voting and e-counting pilots) were also conducted in May 2000, although these pre-dated the establishment of the Electoral Commission.

² Commission pilot evaluation reports can be found on the Commission website: http://www.electoralcommission.org.uk/elections/modernising_elections

responsibility to contribute to debates about how to ensure the UK's electoral processes remain relevant to today's electorate.

Through our Electoral Advisory Board of senior Returning Officers from across the UK we are reviewing opportunities to modernise electoral processes, and we are committed to working with the UK Government and others, including initiatives such as the Speaker's Commission on Digital Democracy, to develop policy and legislation that delivers elections fit for the 21st century.

Specific comments on electronic voting

The Commission believes that voter choice is important to encourage participation. However, the security of any proposal to introduce e-voting would need to be properly assessed before any decision is taken to introduce it. That doesn't mean that e-voting shouldn't be a part of any coherent modernisation strategy.

Any modernised electoral system needs to be more reflective of how society engages with a range of other public services, and e-voting should be part of that conversation. Electronic and other new ways of voting have the potential to increase participation in the democratic process, and may also improve the efficiency of the administration of elections.

In research published in 2003, the Commission found that there was significant demand for electronic voting. The research showed that more than half (55%) of English adults said that being offered e-voting in some form would encourage them to vote at the next local election. And the youngest group - 18-24 year olds - were most keen to try the new methods with three-quarters saying that e-voting would encourage them to participate.

Voting via the internet was seen as most likely to encourage participation (41%) followed by text messaging (33%), electronic kiosks (30%) and digital TV (26%).

However, it is clear that a number of barriers to nationwide e-voting remain. In 2007, the Government ran a range of electoral modernisation pilots at the local elections, including e-voting. The Commission reported in May 2007³ on all the electoral pilot schemes and found that, whilst the pilots had, on the face of it, delivered successfully, there was an unnecessary high level of risk associated with all pilots and the levels of testing, security, reliability and quality assurance adopted were insufficient. There was a general lack of transparency around the technology and its use.

Feedback on the e-voting pilots found that the internet voting channel was particularly well accepted by those who used it, with 87% describing the internet voting process as easy. Approximately 73% of all those polled and 87% of those who used internet voting wanted to see the provision continued at some or all elections in the future.

³http://www.electoralcommission.org.uk/_data/assets/electoral_commission_pdf_file/0008/13220/Electronicvotingsummarypaper_27194-20114_ENSW.pdf

There were a greater number of usability problems with telephone voting. Although 67% described the telephone voting process as easy, around one third (32%) said they found the experience difficult. Nonetheless, approximately 66% of all electors polled and 85% of those who used telephone voting wanted to see the provision continued at some or all elections in the future.

Candidates and agents, however, raised a number of concerns regarding e-voting. The main issue was that the internet voting systems were not open to scrutiny and relied almost entirely on trust.

The Commission's report also highlighted the need, for any pilot schemes:

- to ensure that the security and reliability of the remote e-voting process is sufficient
- to increase the transparency of the solutions adopted to ensure continued stakeholder acceptance of the technology
- for a centrally managed accreditation and certification process to provide independent assurance of e-voting solutions and to enable local authorities to make an informed choice regarding the use of appropriate technology

In order to address the security issues presented by e-voting the Speaker's Commission may wish to ensure that independent experts are engaged in discussions at the earliest possible opportunity. They may wish, for example, to look towards British Columbia, where Elections BC recently convened a panel to consider introducing internet voting. The panel assessed the benefits and challenges of introducing e-voting, looking closely at lessons learnt from other jurisdictions. The panel reported their findings in February 2014⁴. In it they concluded that Internet voting has the potential to provide some benefits, including increased accessibility and convenience for voters, but that other presumed benefits - such as increased turnout and lower cost - are not typically realised.

Finally, once all the security issues inherent in e-voting have been satisfactorily addressed, the Speaker's Commission might want to consider recommending that e-voting is initially launched solely with a discrete sector of society for whom it is traditionally difficult to cast their vote in person, for example overseas voters.

Individual Electoral Registration

The recent introduction of IER has provided an opportunity for some progress to be made towards the modernisation of elements of the electoral system. Under IER it is now possible, for the first time, for electors to register to vote online.

So far, the early signs are that the operation of the online registration facility, which has now been used by nearly 2.4 million people and the feedback on the system itself from those that have used it has been positive. As at 1 October 2014, the user satisfaction score provided by the Government Digital Service (GDS) stood at 93.3%, and over 2/3rds of users have completed their whole application online.

⁴ <http://www.internetvotingpanel.ca/docs/recommendations-report.pdf>

This is in no small part due to the generous timetable afforded to the transition process, and the clarity about the process for the full introduction of IER. This is a valuable lesson to be learnt by anyone considering significant changes to the electoral system. The clarity around outcomes, rather than the use of ad hoc pilots, provided a clear, single goal for everyone involved in the process. The time given to implement the change allowed for detailed planning and risk assessment before the process began, this giving a greater degree of confidence in the transition than if it had been rushed through while the implementation was still being designed.

Other areas for development

On 30 September 2014 Jenny Watson wrote to the Chair of the PCR Committee, Graham Allen, as a follow up to the Commission's evidence session on 4 September 2014. The letter highlighted a number of further issues that could inform the Committee's forthcoming report on voter engagement.

We have attached a paper, in Annex 1, entitled "Towards a vision for 21st century electoral administration", which has recently been discussed with the UK Electoral Advisory Board and which set out a number of options which could improve accessibility and have some beneficial impact on levels of participation.

One issue of potential relevance to the wider debate about electoral modernisation (and possibly e-voting) relates to the electoral register, and whether there is scope for these to be managed electronically in polling stations, with electors being immediately marked off as they vote.

If electoral registers were linked electronically, either within a specific local authority area or on a wider geographical scale, then this could enable electors to voter in polling stations other than the one closest to their home.

For further information:

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Annex 1 – Towards a vision for 21st-century electoral administration

This paper

1. The Electoral Advisory Board (EAB) agreed that one of the issues it would focus on in its 2014 work programme is that of falling participation in democratic processes, and how the electoral community might respond to that.
2. This paper is intended to start a discussion among EAB members by focusing on what a vision for 21st-century elections might look like and how to develop that vision further.
3. The issues outlined in Annex A illustrate the areas that a vision might cover – they are not a list of the Commission’s views on which issues should be prioritised, and they certainly do not represent ‘Electoral Commission policy’. But we hope they will stimulate discussion among the EAB about possible future priorities and options.
4. The paper takes as its focus how the system might look in 2025. It includes elements that are certain, or reasonably likely; as well as elements that would be entirely new, at least to the UK (these latter elements are in italics).

Background and context

5. Turnout at elections has been falling in most jurisdictions across the world over the past few decades⁵; and there is concern about levels of engagement with the democratic process in general.
6. The electoral community is as concerned as others about these trends – to put it at its most basic, those who go to great lengths to conduct excellent polls must be concerned if few electors choose to take part.
7. Although the options available to the electoral community directly to increase voter turnout are limited – there is compelling evidence that the key to any significant change lies in the hands of politicians and campaigners⁶ – there are

⁵ In the period from 1997 to 2010, apart from in UK General Election years it was rare for turnout at any election to exceed 50% (exceptions during that period were elections to the Northern Ireland Assembly, the Scottish Parliament, and Scottish local authorities, with average turnout in non-General Election years of 65.2% (NIA), 54.1% (SP), and 52.6% (Scottish locals))

⁶ For example, a poll published towards the end of 2013 suggested that anger with politicians, about ‘broken promises’, lack of differentiation between parties, and voters finding it hard to associate with any party’s platform were all much greater reasons for not voting than was inconvenience.

certainly steps that the electoral community can and should take to increase the accessibility of the electoral process⁷.

8. The electoral community has a key role to play in ensuring that the electoral system remains accessible as well as efficient, given the evidence that an accessible system is likely to have some beneficial effects on levels of participation.
9. During the last decade, the Electoral Commission called on the UK Government to develop a strategy for electoral modernisation. Although the government has taken some steps to modernise the system (most notably the introduction of individual electoral registration, including online registration), no more comprehensive strategy has yet emerged.
10. However, thinking about the future of the electoral system need not and should not be left to the government of the day. This is a role that those at the heart of the electoral community can take on. Most ROs and EROs have little capacity to consider the future development of the electoral system as well as ensuring that current processes work well and managing incremental improvements. But the Electoral Commission, with the support of the Electoral Advisory Board, can develop thinking within the wider electoral community about how the system should develop, and this is an important part of the EAB's leadership role.
11. Following this initial discussion, the proposition is that we (EC, with EAB members) would develop this thinking further over a period of time (to be determined depending on the scale of our joint ambition) with a view to arriving at a shared vision for how the UK electoral system could change for the better.

Questions to support discussion

- Is there an appetite among EAB colleagues for developing a vision for future electoral administration in conjunction with the Commission?
- What would be a realistic timescale for developing and implementing a vision?
- Are the potential changes in Annex A the right ones to explore? What's missing? Which changes are most likely to make a difference?
- What are the key contextual factors which are likely to influence any future vision – cost, technology, attitudes to political participation, etc?

The Electoral Commission

⁷ For example, respondents to an Electoral Commission survey following the May 2013 polls cited lack of time, being away from home, or 'forgetting' among their reasons for not casting their ballot.

Elements of a vision for 21st-century electoral administration

Legislative Framework

- Following the implementation of recommendations from the Law Commissions, electoral legislation is simplified and codified.
- Changes to legislation are straightforward, with reduced risks of mistakes and oversights
- Changes to legislation are completed in full at least 6 months before each poll
- A series of core procedures for the conduct of polls using various electoral systems (first past the post, STV, SV, etc) is set out (together with necessary high-level provisions for use when polls using different systems are combined)
- Significant elements of the detail previously contained in primary and secondary legislation is set out in Electoral Commission guidance, endorsed by the Electoral Advisory Board (the guidance will thus take on a quasi-legal status, but can be updated more quickly and easily than statute)
- The procedures for conducting elections and electoral registration are straightforward, reflecting the simplification of underlying legislation
- Guidance from the Commission is correspondingly straightforward
- Almost all forms, notices, etc are no longer set out in legislation but are prescribed by the Electoral Commission and endorsed by the Electoral Advisory Board, and are routinely and comprehensively user-tested to ensure they achieve their aims

Co-operation between EROs/ROs

- Electoral administration is commonly overseen by wider groups of EROs/ROs (the Elections Management Board in Scotland; similar groups in Wales and London; other groupings organised on a regional or county basis). The work of these groups will extend on a wider basis than just to facilitate the management of certain polls by one RO with a power of direction – they will be standing groups, and will be the focus for co-operation to share resources, achieve economies of scale and improve resilience.

Elections Management Software

- *EROs and ROs use elections management software built to a specification determined by the electoral community via a process overseen by the Electoral Advisory Board*
- *EMS is software-based, hardware is commercial off-the-shelf, and not election-specific*

Electoral Registration

- Across the UK, we have a system of individual electoral registration (IER).
- The majority of applications to register are dealt with online
- As well as data matching to confirm electors' identity, data mining (checks with other databases such as DVLA) is used to identify unregistered but eligible residents who are then invited to join the electoral register
- Building on the experience of introducing IER, EROs and the Electoral Commission work closely with a wide range of organisations including political parties, civil society groups, charities, etc to maximise public awareness at both the local and the national level of the importance of registering to vote.
- The IER systems in Northern Ireland and in England, Scotland and Wales follow the same principles and largely the same procedures. In particular there is a common approach to maintaining the electoral register from year to year; and online registration is available in Northern Ireland as well as in England, Scotland and Wales
- *The 'edited register' will no longer be in use*
- *We have an 'opt-out' rather than 'opt-in' to changes of address – an ERO who gets information from another source (eg council tax records) that a registered elector has changed address is able to inform that elector that they will update their address details unless the elector objects*
- *Electoral registers used in electoral offices and polling stations are electronic, with electors being immediately marked-off as they vote. This helps (if registers are linked) enable electors to vote in polling stations other than the one closest to their home*
- *Every local electoral register is maintained using the same/compatible software, which potentially enables the maintenance of registers of electors on a larger geographical scale than just the local authority (eg: Police Area;*

European Parliament region; national). This would enable electors to vote in polling stations outside their own local authority area

Candidates

- Candidates will subscribe to the Code of Conduct for Campaigners and there will be effective means of ensuring its provisions are followed
- Deposits will be payable electronically
- *Although candidates may be required to pay a deposit, they may not be required in addition to produce a list of subscribers*
- Nominations will be accepted electronically

Polling Stations

- Polling stations will often be sited in 'less-traditional' locations such as shopping centres, leisure centres, commuter stations, etc
- *Voters will be able to cast their ballot in any polling station in the constituency (including constituencies that extend beyond local authorities, such as Police Areas and EP regions) – their ballot will be conveyed to the appropriate counting location*
- The layout and 'look and feel' of polling stations is based on principles of good design, intended to welcome voters and make it as straightforward as possible for them to cast their vote
- Voters at a polling station will be required to produce acceptable forms of ID
- *Voters cast their vote electronically (eg using a touch-screen) – when they have confirmed their choice(s), a paper ballot is printed which they then place in the ballot box. This would reduce the number of spoilt ballots due to voter confusion (it may be necessary to allow voters the chance to 'confirm' that they intend to vote in a way that will result in a spoilt ballot); and the number of ballots at the count where the voter's intention is unclear. It would also enable electronic counting because the printed ballot papers would be reliably machine-readable.*

Postal Voting

- *Bar-code technology will be used to offer voters the ability to track their postal vote online, to confirm that it has arrived safely with the Returning Officer*

- The numbers of postal votes rejected for not including the voter's signature or date of birth, or because the identifiers do not match those held by the ERO, has reduced significantly from current levels, not least because of the power to contact postal voters whose ballot is not counted for these reasons and invite them to refresh their personal identifiers/take more care at future polls
- *Postal voters are able to print their ballot papers (as in polling stations, above) using software on the internet, rather than hand-filling them.*

Advance Voting

- *Voters who are unable to vote at a polling station on election day but who do not want to use postal voting have the option of casting their vote in person at a polling station for a limited period in advance of polling day*
- *'Election day' may be held on two consecutive days.*
- *Election day may move from the traditional Thursday*

Mobile Polling Stations

- ROs will be able to visit electors who are unable to get to a polling station, allowing them to vote independently and in secret if they do not wish to use postal or proxy voting (e.g. voters in hospital, or in long-term care)

Internet Voting

- Although electronic registers, and electronic voting in polling stations, provide some of the framework that would support internet voting, the challenges of internet voting still outweigh the benefits for most voters⁸
- *However, internet voting is available to certain groups of voters (overseas, voters with disabilities for whom it will provide the option to vote independently) on an experimental basis*

Counting Votes

- *Ballot papers are verified automatically using bar-code and scanning technology*

⁸ See **Annex B** for an interesting recent summary from British Columbia in Canada of the perceived benefits and challenges of internet voting. See also the Commission's 2007 evaluation of the e-voting electoral pilot schemes at local government elections in England:
http://www.electoralcommission.org.uk/__data/assets/electoral_commission_pdf_file/0008/13220/Electronic_votingsummarypaper_27194-20114__E__N__S__W__.pdf

- *Ballots are counted electronically*
- *E-counting software is built to a specification determined by the electoral community via a process overseen by the Electoral Advisory Board.*

Training

- High-quality, effective and easily-accessible training is available in all aspects of electoral administration
- All newly-appointed ROs, EROs, PAROs, RROs, etc undertake tailored training before conducting their first poll or significant registration activity

Public Awareness

- Building on the experience of introducing IER, EROs and ROs have continued the approach to building and implementing local public engagement plans
- The Electoral Commission will continue to supply tested material (letters, forms, etc) for local use
- The Electoral Commission will run larger-scale public awareness campaigns focused on the need to register to vote/keep registration details up to date and on the voting process.

Electoral Administration Data

- The costs of electoral registration and of conducting various polls are well-understood and transparent, enabling analysis and decision-making
- The procedures for reimbursing ROs (and, where appropriate, EROs for costs they incur) are straightforward, consistent and proportionate
- Data on electoral procedures are routinely gathered and collated in a way which allows evidence-led analysis and decision-making

Independent Panel on Internet Voting, British Columbia

Preliminary Report - October 2013⁹

After this review, the panel notes that the benefits of Internet voting are not as persuasive as one might initially think. The panel also recognizes that policy-makers and election administrators will need to seriously consider the ability of each jurisdiction to satisfy the challenges posed by introducing Internet voting. The following represent the panel's assessment of the perceived and actual benefits and challenges to implementing Internet voting at the local and provincial government levels.

Perceived and actual benefits

Increase voter turnout:

- Evidence is mixed, at best
- Not convinced Internet voting will result in increased turnout at either level in the long run
- Not a compelling reason for introducing Internet voting

Increase accessibility/convenience:

- Most significant potential benefit for B.C. voters
- Potential benefits greater for local government elections due to seasonal weather constraints for fall elections
- Fewer potential benefits for provincial elections due to broader existing absentee voting opportunities
- Most compelling reason for Internet voting

Improve speed and accuracy of results:

- High level of confidence by election administrators at both levels in current counting methods
- Speed of overall results still dependent on hand-counted paper ballots (unless Internet voting is only channel)
- Preliminary results already reported quickly on election night for both local government and provincial elections

⁹ internetvotingpanel.ca

- Not a compelling reason for introducing Internet voting

Cost savings of administering Internet voting over in-person voting:

- Opportunities for cost savings require Internet as only option
- As an additional channel, Internet voting will result in increased costs
- May be possible to offset some Internet voting costs with reduced in-person voting
- More costs to consider than the contract with the vendor or initial development of system in-house (see Cost on page 36)
- Not a compelling reason for introducing Internet voting, at least in the short to medium term

Requires fewer resources of parties and candidates:

- Fewer volunteers possible if Internet voting is only option
- As an additional channel, more volunteers required
- Volunteers need different skills under Internet voting
- Not a compelling reason for introducing Internet voting

Reduce/eliminate errors made by voters when casting ballots:

- Potential to eliminate errors due to incorrect markings
- No impact on ballots that are intentionally spoiled
- Not a compelling reason for introducing Internet voting

Maintain relevance by keeping up with other aspects of society:

- Symbolic potential benefit not considered significant for B.C.
- Not a compelling reason for introducing Internet voting

Greener:

- Relative “greenness” unknown without full evaluation of both Internet voting and traditional voting

Perceived and actual challenges

Security:

- Potential for large-scale fraud is greater for Internet voting than traditional voting opportunities
- Policy-makers must decide an acceptable level of risk to a jurisdiction

Compromised election results:

- Higher profile elections may make more attractive targets
- Consequences likely higher at more senior levels of government
- Election of wrong candidate or party in even the smallest community a serious matter

Accessibility, usability and availability:

- Compatibility with accessibility software and hardware needs to be considered
- Digital divide not a significant concern
- Can be largely overcome if considered early enough

Authentication and ballot anonymity:

- Key issue for jurisdictions considering Internet voting
- Two-step authentication can be more secure, but also more complex for administrators and voters
- BC Services Card could make authentication a less significant issue if considered secure and can be incorporated into an Internet voting system

Secrecy of the ballot:

- All remote voting opportunities offer reduced degree of secrecy Use of vote by mail very low at both levels
- If Internet voting widely adopted, this risk increases
- Effects of improper outside influences (e.g., coercion, vote-buying) can be mitigated by: Permitting voters to cast multiple ballots, with each subsequent ballot replacing the previous ballot
- Establishing that a paper ballot supersedes any Internet ballot cast by a voter
- Ending Internet voting ahead of general voting day

Transparency and auditability:

- Oversight significantly different from traditional voting
- Nature of oversight shifts from individual to systemic
- Limited ability of candidates/parties/smaller jurisdictions to effectively audit Internet voting
- May need to be outsourced
- Centralized oversight and auditing body may be necessary for local government elections (e.g., provincial government, multiple jurisdictions)
- Reviews and audits are no guarantee that a system works as promised
- Encryption and end-to-end voter verifiability important aspects of ensuring transparency and auditability