

Technology in Democracy

Submitted to the Democracy Commission by
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Abstract

The Democracy Commission has requested submissions under broad terms of reference dealing with the present state of and the future of democracy in Ireland.

As a group running a successful campaign using technology as a tool for participation in the democratic process and involved in public debate regarding technology in democracy, Irish Citizens for Trustworthy Evoting believes that a submission describing its experiences will be of use to the Commission.

We submit that the introduction of electronic voting and counting in its proposed form is an example of the misuse of technology in democracy. Further, we submit an overview of our experiences as an electronic participation group.

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1 Introduction

Irish Citizens for Trustworthy Evoting (ICTE) is an alliance of citizens, brought together by serious and legitimate reservations over the introduction of electronic voting in its proposed form. ICTE was established formally in May 2003 by Ms. Margaret McGaley but has grown quickly and includes some of those that had previously been lobbying and raising their concerns in isolation. Currently its membership comprises over one hundred people, including technical and legal experts.

Organising via a mailing list and website, with limited face-to-face participation, the group has run a successful campaign using technology as a tool for participation in the democratic process. As such, we believe that we can be of help to the Commission in two ways.

First, we submit that the introduction of electronic voting and counting in its proposed form is an unfortunate example of the misuse of technology in democracy. It is vital that where technology is introduced into the democratic process, a clear understanding of its strengths and limitations is present. We will show how the proposed electronic voting system has failed in this regard, and suggest how this might be avoided in similar projects in the future.

Second, having directly experienced the power of technology to enable effective democratic participation, we submit an overview of our experiences as an e-participation group. We discuss the forms our participation took, the strengths and weaknesses of electronic participation as we see them, and the role such technology might play in democracy and government in the future.

2 Electronic Voting

Electronic voting has the potential to offer several benefits, including reducing the number of mistakenly spoiled ballots and making voting more accessible. However, it also introduces an entirely new and unfamiliar risk model to the democratic process. The systems of checks and balances developed over the years to protect the ‘Australian’ (that is, paper) ballot no longer apply.

The proposed Irish electronic voting system records votes directly to computer storage, via a voting machine. This voting machine runs computer software written by humans. When a voter uses one of these machines, the vote is processed by the software before being stored.

If there were any error in the software – either by simple mistake or by malicious intent – the vote could be recorded incorrectly. No one would ever know. There is no way of checking that the machines are working as they are supposed to. There is no way to have a recount that is independent of the electronic system.

When developing an electronic system, it is important to carefully state the requirements to be placed on the new system. The danger is that at the start of the project, some requirements will be misunderstood and as a result the finished system will not be fit for the use intended.

This is especially true when the new system is to replace an older, non-electronic one. In such situations, it is easy to miss requirements that were implicitly rather than explicitly fulfilled by

the older system. The proposed electronic voting system is a case in point: it completely misses the requirements that the voter be absolutely certain that their vote has been recorded, and that the system can be verified independently.

ICTE, joining with electronic voting and computer security experts worldwide, proposes a simple solution: before storing the voter's electronic vote, the machine prints a paper ballot. The voter checks that the paper ballot is exactly the same as the vote they have entered into the machine. Finally the paper ballot is placed in a sealed ballot box at the same time as the electronic vote is stored.

With this system in place, we would have a paper record or audit trail to compare the electronic votes with. Most importantly, the voters themselves would have checked the accuracy of this paper record. Such a system is called a voter-verified audit trail (VVAT).

ICTE does not oppose the introduction of electronic voting, and would welcome a trustworthy system capable of bringing the possible benefits to our polls. However, we also believe that the dangers posed by the system proposed for use on June 11th are so serious that it is not suitable for use in Irish elections.

This unfortunate situation is a good example of technology being introduced into the democratic process without a clear understanding of its limitations. Projects dealing with electronic participation in democracy must be carefully handled; a technological solution, badly implemented, could be less useful or less trustworthy than the processes it replaces.

Above all, it is important that those charged with implementing electronic systems for use in democracy be aware that such systems by their nature introduce a whole set of their own problems. Inadequate consultation with the indigenous technology community could be seen as the primary source of problems with the proposed electronic voting system; this should become a lesson learned in future projects, rather than a mistake to be repeated.

Much greater detail on the problems with electronic voting can be found in [Mer92], [Sch00] and [Neu93]. Papers dealing specifically with the proposed Irish system include [MG03] and [ICfTE04].

3 Electronic Participation

ICTE is based around a simple public electronic mailing list, as well as a website. Such technology is now widely and freely available. Mailing lists work well as tools for discussion and knowledge sharing. They provide a forum that facilitates efficient asynchronous discussion, and is flexible as to the amount of time necessary to participate. Websites make good centralised information-stores; for example, the ICTE site stores or links to all the documents we retrieve or create in the course of our investigations. It also holds information on the group, how to join, and archives of the mailing list.

A well-run and professional mailing list is an ideal forum on which to develop coherent group positions in an inclusive manner. The format can be genuinely democratic. However, lists suffer from some weaknesses. Because communication is not face to face, important body language is missing. The format is weak for arguing points requiring frequent exchange; there are often

lulls and delays in electronic mail. This might be overcome by adding real-time Internet chat to the tools used by the group. Such technology is also widely available.

To a lesser extent, ICTE also uses document collaboration tools, something that we now see as highly important for an effective electronic participation group. Although developing documents using email is possible, it does not work well. Better technology exists, probably the simplest of which is known as 'Wiki' technology. This allows users to easily edit documents via the World Wide Web, which flattens the learning curve for participation.

Fully public electronic participation has great advantages where transparency, accountability and accessibility are concerned. There are some problems with this approach, however. A campaign organisation like ICTE, operating in public view, must be comfortable with the fact that discussions may be used or manipulated by cynical opponents. This would likely be less of a problem on a less 'campaign-oriented' forum, but the possibility of individuals controlling debate for their own ends remains. In any case, our experience would suggest that the efficiency gains of operating transparently vastly exceed the possible 'cost' of being monitored.

Could the model of e-participation used by ICTE be used by Government to seek comment from the ordinary public? We believe so. The use of technology to foster active but efficient debate among a very large number of participants is a fascinating possibility. This would take serious will on the part of the Government; a more genuinely open and direct dialogue with the public might require a great change in attitude. Meanwhile, the main ways that the Government can facilitate greater democratic participation by electronic means is to provide infrastructure, such as countrywide broadband access, and to lower the bar for public access to communications technology.

4 Conclusion

Technology, implemented properly and used appropriately as a tool, has the potential to bring democracy to a new level of public participation. Used or implemented badly, it could create mistrust, alienation and a sense of exclusion among non-technical voters.

Use of technology in democracy should be concerned primarily with social progress rather than technological progress. It could be an enabler in moving from purely representative democracy to a more direct democracy. However, it must never be used in such a way as to exclude those without ready access to technology. It can overcome problems of geographic distribution, but favours certain demographic groups: younger, better educated, higher earners. It will fail as a tool in democracy if access to technology becomes a de facto requirement for participation in politics without becoming spread across all social groups.

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