

GI, the Gesellschaft für Informatik, publishes this series in order

- to make available to a broad public recent findings in informatics (i.e. computer science and information systems)
- to document conferences that are organized in cooperation with GI and
- to publish the annual GI Award dissertation.

Broken down into the fields of "Seminars", "Proceedings", "Monographs" and "Dissertation Award", current topics are dealt with from the fields of research and development, teaching and further training in theory and practice. The Editorial Committee uses an intensive review process in order to ensure the high level of the contributions.

The volumes are published in German or English

Information: <http://www.gi-ev.de/service/publikationen/lni/>

The 2006 conference on Electronic Voting took place in Castle Hofen near Bregenz at the wonderful Lake Constance from 2nd to 4th of August. This volume contains the twenty papers selected for the presentation at the conference out of more than forty submissions. To assure scientific quality, the selection was based on a strict and anonymous review process. The papers cover the following subjects: e-voting experiences, social, legal, political, democratic and security issues of e-voting, as well as solutions on how to (re)design election workflows, and finally how to implement and observe electronic voting systems.



Robert Krimmer (Ed.): Electronic Voting 2006

P-86

GI-Edition

Lecture Notes in Informatics

Robert Krimmer (Ed.)

Electronic Voting 2006

2nd International Workshop
Co-organized by Council of Europe,
ESF TED, IFIP WG 8.5 and E-Voting.CC

August, 2nd – 4th, 2006
in Castle Hofen, Bregenz, Austria

Proceedings



Voting in Uncontrolled Environment and the Secrecy of the Vote

Kåre Vollan¹

Quality AS
P.O. Box 5153 Majorstua
NO-0302 Oslo, Norway
kvollan@online.no

Abstract: Voting in uncontrolled environment either by post or by the Internet is about to be made generally available in many countries. The main purpose is to increase participation at times when the voter turnout is generally decreasing. Electronic voting both in or outside controlled environment offers advantages in producing fast and reliable results and long term cost savings in the conduct of elections.

A number of problems relating to security, reliability and general trust can be solved by Internet voting, once an infrastructure for voter identification is in place. However, neither postal votes nor Internet votes can guarantee that the vote is cast in secrecy without intimidation or pressure. Even without the most serious violations to a free vote, the pattern of voting will change and the concept of voting being a strictly personal and secret act is likely to be weakened over time.

There are few reasons to doubt that the introduction of voting by Internet once generally available will have the same success in terms of usage as other Internet services such as bank transactions, tax returns etc. Once being implemented in a user friendly and reliable manner the electronic interface may within foreseeable future become the major voting channel.

This paper does not discuss in depth the legal issues related to whether uncontrolled voting meets international commitments regarding a secret vote. The focus is to what extent the most likely change of voting pattern from a public to a more private, but less secret event, is a positive development. It concludes that the problematic issues which can be raised are fundamental and the long term damage to the perception of a personal and secret vote should be discussed by governments and inter-government organisations. Alternatives such as electronic voting in controlled environment prior to election day may, to a large extent, serve the same purpose without showing the negative side effects of voting outside of controlled environment.

¹ The author is a consultant on electoral issues providing advice mostly in post conflict countries and in countries in transfer to democracy. He has also headed a number of international election observation missions and he is a registered IT quality auditor (IRCA).

1 Introduction

1.1 Trends in Voting Methods and Voting Behaviour

The international trend of decreased turnout in elections has led a number of countries to offer possibilities of voting outside of polling stations on election day. The main class of alternatives is variants of early voting (voting before election day) either conducted in controlled environment where the voter has to meet in person and election officials will check that the vote is cast in person and in secrecy or cast in uncontrolled environment by a postal vote or a vote by Internet. In addition voting may be offered to bedridden people by use of mobile teams on or before election day and remote voting may be available even on election day.

Increasing voter participation is clearly the main reason used to offer early voting in various forms, but other reasons will also be discussed below. Early voting in controlled environment is common for example in Scandinavia. In Norway around 20% of all votes cast in the last elections have been early votes [NO00]. Postal votes were first introduced to accommodate groups which would otherwise be disenfranchised such as voters travelling or living abroad or voters with disabilities making it difficult to come to a polling station. However, postal voting has in some countries such as Switzerland, Great Britain and Spain been offered to voters in general. In the general elections in 2005 in the UK the share of voters requesting a postal ballot was 12.1% up from 8.3% during the European Parliament and local elections in 2004 [UK01].

Voting by Internet has been offered in some countries such as Switzerland (in some cantons) and Estonia. In November 2005 23% of all votes cast in the municipalities with the possibilities for Internet voting in Geneva used that possibility. During the 2005 local elections in Estonia less than 2% of those voting cast an Internet vote [NO00].

A number of countries are assessing the possibilities for introducing voting by Internet. The main concern has been the reliable voter identification together with the secure technical implementation of such systems. Public systems for electronic signatures², which will help solving some of the security issues with Internet voting, are being introduced. If such public systems are regarded sufficiently secure for bank transactions and public services in general at least the highest security level offered for such services would suffice even for voting. Once the security requirements have been met it is likely that Internet voting will be proposed in a number of countries in the years to come. Once introduced it may show the same effect as other Internet based services and a major share of the votes cast may be Internet votes but whether Internet voting will increase the total turnout or just replace other means of voting remains to be seen.

² PKI – Public Key Infrastructure.

The Council of Europe has assessed electronic voting in uncontrolled environment against international obligations and commitments in the Recommendation of the Committee of Ministers to member states on legal, operational and technical standards for e-voting [CE03]. The recommendation states:

“Bearing in mind that the right to vote is one of the primary foundations of democracy, and that, consequently, e-voting system procedures shall comply with the principles of democratic elections and referendums;

Recognising that as new information and communication technologies are increasingly being used in day-to-day life, member states need to take account of these developments in their democratic practice;

Noting that participation in elections and referendums at local, regional and national levels in some member states is characterised by low, and in some cases steadily decreasing, turnouts;

Noting that some member states are already using, or are considering using e-voting for a number of purposes, including:

- enabling voters to cast their votes from a place other than the polling station in their voting district; ...”

When discussing the international commitments the recommendation says:

“IV. Secret suffrage

16. E-voting shall be organised in such a way as to exclude at any stage of the voting procedure and, in particular, at voter authentication, anything that would endanger the secrecy of the vote.

17. The e-voting system shall guarantee that votes in the electronic ballot box and votes being counted are, and will remain, anonymous, and that it is not possible to reconstruct a link between the vote and the voter.

18. The e-voting system shall be so designed that the expected number of votes in any electronic ballot box will not allow the result to be linked to individual voters.

19. Measures shall be taken to ensure that the information needed during electronic processing cannot be used to breach the secrecy of the vote. “

The secrecy of the vote is only discussed in the technical context in the paper: The system need to be designed in such a way that individual votes cannot be identified once the result is established. The conclusion has also been shared by the Venice Commission [CE03]:

“1. In conclusion, remote voting is compatible with the Council of Europe’s standards, provided that certain preventative measures are observed in the procedures for either non-supervised postal voting or electronic voting.”

The fact that the voter may not be alone when casting the vote is much less prominent in the documents from the Council of Europe. This is a fundamental feature of both Internet and postal voting. Even if the vote once cast cannot be traced to the voter, the secrecy of the vote cannot be guaranteed. So far international observer missions and organisations have concentrated on security issues and much less on problems related to votes cast in groups with possibilities for undue pressure and even intimidation.

There is not full international agreement to whether uncontrolled voting complies with the requirements for secret votes. A number of countries have decided to be restrictive in offering such possibilities and if they do it is only offered to groups of voters who would clearly otherwise be disenfranchised. Other countries have decided to open such possibilities for all voters and their view is that the voting still complies with international standards as long as a controlled alternative is offered. This paper will not discuss the legal aspect of the question in full depth even though the international commitments are listed below. The subject for this paper is rather to what extent the development towards more uncontrolled voting is a positive development. By offering voting in uncontrolled environment to voters in general the concept of elections is being changed without a thorough discussion of the most likely end result: Voting may not be a secret act any more but may be carried out by voters sitting together, in families, in groups of young people, in community centres etc. This may open the vote for intimidation, trade with votes etc. But even if the most serious violations will be limited the effect over time may be that the concept of a personal, secret vote is weakened.

1.2 Types of Voting

Direct elections to national and local representative bodies have traditionally been conducted in polling stations during one or few election days. Polling station staff ensures that the vote is cast in person and in secrecy free from intimidation and pressure of any kind. Under various conditions many countries have allowed for early voting, postal voting and recently voting over the Internet.

It is common to differentiate between the following types of voting:

- a. Voting in controlled environment, means any voting where election staff overlook the process of casting the ballot. This may happen in a polling station on election day or in a particular site for early voting.

- b. Voting in uncontrolled environment either as a postal vote or by the Internet. In these cases it is up to the voter to secure the physical environment under which the ballot is cast.

The ballot may be a paper ballot or an electronic ballot. In addition the vote is conducted in phases:

- a. The phase prior to elections day, the early voting
- b. The election day(s) voting.

Voting types may be illustrated by the following matrix [NO01]:

	Controlled		Uncontrolled	
	Early voting	Election day voting	Early voting	Election day voting
Paper	At defined sites with regular paper ballots	Traditional polling stations with paper ballots	Postal votes	Postal votes
eVoting	Voting machines at defined sites	Voting machines in polling stations	Internet Voting	Internet Voting

Figure 2: Overview of types of voting

2 International Commitments Related to the Types of Voting

According to broadly accepted standards election should be *universal, free, fair, secret and transparent* [OD04].

A *free* vote means that the ballot is cast in person free from intimidation and undue pressure. *Universal* means that every citizen who has reached a certain age and fulfil accepted criteria can cast a vote. *Secret* would mean that the person can rest assure that the vote will not and can not be disclosed to anybody. This does not prevent a voter from volunteer his or her choice but it should not be possible to verify the information given by the voter. *Fair* means that candidates run under the same conditions and their supporters have the same fair chance to take informed decisions and cast the vote. The requirement of being fair would also imply all votes should be counted correctly, the tabulation should be correct and the process protected against fraud and mistakes. The best guarantee against fraud and mistakes when using traditional technology is *transparency*. This is assured by the possibility for representatives of all stakeholders to witness every step of the process, from the voter enter the polling station to the protocol is drawn up and the results are tabulated. The only exception is when the voters are making his or her personal secret choice.

The different types of voting will score differently for each of the commitments, which the table below indicates:

Commitment	Controlled		Uncontrolled	
	Paper	Electronic	Paper	Electronic
universal	Medium	Medium	High*	Very High*
free	Very High	Very High	Very Low	Low
fair	Very High (-)	Very High (+)	Low	High
secret	Very High	Very High	Very Low	Very Low
transparent	Very High	Low (-)	Low	Low (-)

* The high scores are in particular set for situations where uncontrolled voting comes in addition to voting in the polling station, but may eventually deserve a high score even if uncontrolled voting were the only option.

Figure 2: An indication of how controlled and uncontrolled voting meets international criteria for elections.

The table is meant as an indication only. The rating clearly depends on how each type of voting is implemented. It is possible to conduct paper voting in a polling station without any transparency and one may improve transparency for electronic voting in polling stations by printing a paper which can serve as an audit trail. The rating should reflect situations where regular procedures are applied by an election management body (EMB; that be a ministry, an independent election commission or any other body charged with the overall election administration responsibility) in good faith in order of conducting correct elections.

Voting outside controlled environment is being used mainly to strengthen the *universal* quality of the vote. By requiring voters to meet in person in a polling station on election day, bedridden people, people with disabilities, people travelling etc may be disenfranchised. In addition some voters may just decide to go to the polling station, but they may choose to vote by mail or by Internet if given the chance.

The freedom and secrecy can clearly best be guaranteed when the vote is cast in controlled environment. This is the only place where officials can make sure that the vote is cast without undue influence of any kind.

A *fair* election would on polling day mean that the process works as intended. Even in traditional democracies the controls and checks have not always been implemented in such a way that deliberate attempts to cheat could be resisted. Often the identity of the voter is not checked, voting material may not be secured and the rules for secret voting may have been rather relaxed even in polling stations.

On the other hand in controlled environment the possibilities for preventing impersonation, intimidation and group pressure is obviously much better than if the voter has to secure his or her own environment. The possibilities of impersonation are much higher by uncontrolled voting, even though modern measures may help reducing the risk by Internet voting.

When the votes are cast by paper ballots and manually counted the process is slow and often inaccurate. Human errors are bound to happen and the verification procedures for disclosing mistakes may vary a lot. Electronic voting, in controlled or uncontrolled environment, has the big advantage of producing correct results fast.

A *transparent* election is secured in polling stations by a fairly simple and compressed process witnessed by observers and the general public. This does not mean that voting in polling stations is always flawless, but correctly implemented there is a paper trail from observed vote till the protocol is signed which can be witnessed and checked even after the elections. Electronic voting has a major disadvantage in that ballots are being stored as electronic information within the computer and the integrity of the vote and the count is only guaranteed by the IT-systems themselves. Measures can be taken to validate the systems and certification schemes may be established, and the requirement for transparency may rest more on the process of acquisition rather than the vote itself. However, all such measures are dependent on a genuine, general trust in the EMB [KV05] and [OB08]. Should the EMB have a will to manipulate the systems to produce a certain result, this can hardly be prevented by independent validation of the system. Validation would be on prototypes and only the EMB can guarantee that the systems used are exact copies of those being validated.

3 Challenges to Voting in Uncontrolled Environment

Uncontrolled voting by mail and by Internet faces severe problems both regarding security and secrecy. On the security issues electronic voting has clear advantages provided modern identification measures are implemented. However, there is no technology available to guarantee that the vote is cast in secrecy free of intimidation and pressure.

3.1 Postal Votes

Postal vote is possibly the most vulnerable method being used today. It has been used to accommodate groups which would otherwise be disenfranchised, but in some countries it has been offered to the electorate in general.

Allowing refugees to vote was an important feature of the election Bosnia and Herzegovina after the war ended in 1995. From 1998 such votes were done by mail. During the elections in 1998 and in 2000 blatant attempts of impersonation of voters were disclosed and even high officials were penalised for assisting in the fraud³.

Great Britain has in the last elections allowed for postal vote on demand. That means that any voter can request a ballot be sent to his or her address and the voter returns it by mail. During the elections for the Birmingham City Council in 2004 postal voting was used to fraudulently change the results in the wards of Bordesley Green and Aston [BI09]. Persons involved were penalised and some candidates lost the right to stand for elections. A number of techniques were used to manipulate the postal vote, such as requesting the ballot to be sent to addresses where community leaders would fill them in and return them, theft of postal bags, reopening and changing ballots, etc. The election court⁴ found that the “evidence of fraud was overwhelming”.

3.2 Voting by Internet

Most of the most blatant violations from Bosnia and Herzegovina or from Birmingham could be avoided by a good security system implemented on Internet voting. Electronic voting in uncontrolled environment should, if correctly implemented, protect the integrity of the voting better than postal votes [NO00] and [KV05].

Postal votes may require a signature to an outer envelop and the signature may later be checked if one suspects irregularities. Electronic signatures are being introduced in a number of countries for use in Internet bank transaction, communication with authorities including tax returns etc. So far the most common way of doing this is by pin codes combined with permanent or dynamic passwords. None of these methods offers any guarantee that the person at the screen is the person given the codes, and it is accepted (regardless whether it is legal or not) that person may use an authorisation to actually operate the computer on somebody else’s behalf.

Future technology will probably include keys with biometric identification, and at that point in time one may be able to check that the person with the authorisation is present at the computer, but there is no guarantee that the person is alone. In conclusion the practical measures taken against impersonation may be much stronger for Internet voting than by postal votes. The secrecy of the vote can, however, never be guaranteed by any uncontrolled voting.

3.3 International Conventions and Commitments

It is universally accepted that principles of suffrage require a State to establish a system of elections that ensures secrecy of the ballot. Article 25 of the 1966 International Covenant on Civil and Political Rights (ICCPR) provides:

³ The author was Director for Election at the OSCE Mission to Bosnia and Herzegovina in 2000.

⁴ In local government elections in Britain, an “election court” is a court consisting of one High Court Judge.

(b) to vote and to be elected at genuine periodic elections which shall be by universal and equal suffrage and shall be held by secret ballot, guaranteeing the free expression of the will of the electors;

European conventions and commitments are consistent with the ICCPR. Article 3 of Protocol N°1 to the European Convention for the Protection of Human Rights and Fundamental Freedoms similarly provides:

The High Contracting Parties undertake to hold free elections at reasonable intervals by secret ballot, under conditions which will ensure free expression of the opinion of the people in the choice of the legislature.

The Document of the Copenhagen Meeting of the Conference on the Human Dimension of the CSCE, later the OSCE, (29 June 1990) states:

(5) [The participating States] solemnly declare that among those elements of justice which are essential to the full expression of the inherent dignity and of the equal and inalienable rights of all human beings are the following:

(5.1) free elections that will be held at reasonable intervals by secret ballot or by equivalent free voting procedure, under conditions which ensure in practice the free expression of the opinion of the electors in the choice of their representatives;

(7) to ensure that the will of the people serves as the basis of the authority of government, the participating States will

...

(7.4) ensure that votes are cast by secret ballot or by equivalent free voting procedure, and that they are counted and reported honestly with the official results made public;

These conventions and documents state the obligation of a State to hold free elections by a secret ballot.

Election observer missions to transfer democracies have normally commented upon breach of secrecy when being observed in polling stations. So-called family voting is common. This is voting where family members enter the secrecy booth together. There may be no sign of intimidation, but it is still reported as a violation of the rules. Observer missions have been less concerned with the possibility of team work when an uncontrolled ballot has been filled in, even though the aspect has been mentioned.

Some countries interprets the commitments to mean that all votes cast should be secret whereas other would hold it for sufficient if a controlled environment is being offered to all voters who want to cast a secret vote.

4 Aspects of a Secret Vote

Postal voting and voting by the Internet do not guarantee a secret vote. Even with strong instructions and guidelines, there will be no guarantee that a ballot has been filled in secret with the marked ballot out of the view of others. In the following various aspects of allowing for a non-secret vote are discussed.

4.1 Tracing Votes Cast in Paper Based Systems

A secret vote would mean that nobody witness any acts where the voter's choice is being made. In addition the system should insure that a vote already cast cannot be traced back to the voter.

In some traditions, e.g. in the UK and in some former British colonies, the ballots are numbered and the voter's name is entered on the ballot stub with a corresponding number. This enables election officials to trace votes of individuals after the elections. Such a tracking would be a serious election violation and the secrecy may be maintained in countries with an election administration with full integrity. The justification for the numbers is that it may be used when investigating petitions relating to election fraud, and only a judge can allow for the secrecy to be broken. As one of the few cases in recent years such a decision was issued in the UK during the investigation of the Birmingham case mentioned earlier.

If very small batches of ballots are accounted for it may be a breach of secrecy. Many countries would therefore have a minimum number of ballots (e.g. fifty) which can be counted in an identifiable batch.

For early voting or ballots cast in a polling station where the voter is not registered so-called tendered ballots are used to prevent multiple voting or to check the voting right of a non-listed voter. The ballot is called tendered because it is not immediately accepted. It will have to be verified against the voter register and against any multiple voting by the voter before being accepted. The ballot is put in an unmarked envelope which in turn is entered into an envelope where the voter's name and ID number and possibly a signature is written on the outside. During the count the outer envelope is checked against the voter registers and if it is accepted as a good vote the outer envelope is broken and the inner envelope is entered into a box. After the verification process the box is emptied, the ballots removed from the neutral envelopes and the votes are counted.

If the procedure is followed, the secrecy of the voters is maintained. This process can be observed by candidate representatives, but it also depends on a certain level of trust. Checking certain voters' ballots would be technically possible, but clearly a serious election offence.

4.2 Why Secret Votes?

The reason for the secrecy is first of all that the vote should be cast without any interference, intimidation or pressure. The ballot is the voter's own personal expression of his or her will. Without having any way of checking what an individual has voted buying votes will be practically impossible, even though strong community leaders may be able to direct a village or neighbourhood without having the possibility to check each vote individually.⁵

The concept of a secret vote is so well rooted with most people in old democracies. During the upbringing, in schools and in participation in the civic society the secrecy of the vote is taken for granted. A very strong protection of the secrecy may not be felt to be needed any more because any voter who wants the secrecy be protected will be able to cast the vote free from pressure.

In transfer democracies so-called family voting (family members entering the secrecy booth together) used to be common. This did not necessarily mean that voters were intimidated, but the vote was clearly less personal than if cast in solitude. Not least by encouragement from observer missions and the international community in general stricter rules have been implemented in a number of countries. In the elections in the Palestinian territory in January 2005 and in January 2006 the training of election staff had improved tremendously compared to the elections in 1996⁶, and family voting was reduced if not eliminated. The long term effect of a strict regime will hopefully be a more profound understanding of the personal responsibility every voter has for the vote.

In Russia and in Romania it was common in early elections after the change to multi party elections (1992 and 1993) to observe large groups of voters filling in the ballots together outside the booth, at least in some districts⁷. The reasons given could be the complexity and lack of light in the booth etc. Intimidation was not necessarily observed or reported, but obviously in such circumstances it would have been possible for a community leader (a mayor, a kolkhoz director etc) with his or her mere presence to control the voting.

In the cases above there may not be a strong wish by the voter to hide his or her vote from either a family member or from all other people present for that matter. On the other hand the environment does not demonstrate the personal nature of the vote and it does not encourage people to insist on a secret ballot.

The conclusion is that the concept of a secret vote is not an obvious one. In order of having the concept generally accepted the secrecy would have to be enforced.

⁵ Examples of retaliation on a whole village or threats of the same has been observed in some countries though, e.g in Zimbabwe in 2003 and 2005 [KV06] and [KV07].

⁶ See election observation reports from the EU and NDI.

⁷ See the reports of the Norwegian Helsinki Committee on elections in Romania in September 1992 and in Russia in December 1993.

4.3 Effects of Non-Secret Votes

When discussing the uncontrolled vote as an offer to all voters one has to consider the variety of family structures and community structures that exist in any society. In the Birmingham case the judge wrote: “It should be merely noted that undue influence remains a huge and apparently irradicable problem with postal voting, especially in vulnerable communities, including some of those with ethnic minority electors” [BI09]. This is a comment not on the fraud which the case was concerned with but rather the general problem of a non-secret vote. The Birmingham case included minority communities with traditional family structures. The problem may, however, be valid in a large variety of families.

In a many families the *pater familias* (or any family head) may do all the paperwork and mark all ballots for the whole family, only asking family members to sign the forms or provide the electronic signature where required. Members of the household may accept this as a simple arrangement for paying bills, do tax return, etc and therefore fail to see a problem if the same arrangement is followed for voting. It could happen that a family member would want to cast an individual vote, but due to a traditional respect for the head of the family he or she would hesitate to demand to fill the ballot out in person and in secrecy. In addition to the possibilities of “family voting”, there may also be possibilities for a coordinated effort by community leaders which go beyond legitimate assistance and which may include breach of secrecy.

This has a self strengthening effect: Voting will not have any focus in the family because the family head is always taking care of it. As a consequence political consciousness may be reduced and a wish for casting a secret vote may never be expressed, even when a family head would have no objection to it. The problem is not so much the cases where a family member insists on a personal, secret vote, but rather where the voting is seen as any other paperwork and does not get any special attention. The opportunity of building up consciousness about the basics of representative democracies is weakened or lost.

The main source for the understanding of a personal and secret vote has been the strict regulation of the vote in polling stations. Should this educational element be less prominent it may happen that new generations of voters would lose out on the personal aspect of the vote. The effects may be stronger for groups of immigrants from countries where family voting is an almost legitimate tradition even in polling stations, but the risk is there for all groups. Internet voting is often said to be more attractive for young people. If so, young people may then choose to vote together and a group pressure may easily develop.

4.4 Proposals to Reduce the Negatives Effects of Uncontrolled Voting

Some measures may be taken to reduce the negative effects of uncontrolled voting. One is to allow for uncontrolled voting only prior to the elections, not on election day (as in Estonia in 2005). In such case one may build into the system a legal possibility to regret the vote and to override the vote on election day in the polling station. This can be implemented by regarding the postal ballot as tendered ballot which has to be checked against the voter register and the votes cast on election day before being counted.

By early Internet voting the voter may be given a possibility to change his or her vote either on the Internet or by casting a ballot in person on election day. That would offer a possibility to such voters who might have been under pressure by family members, community leaders or friends to cast a particular Internet vote to override the vote on election day in controlled environment. This would only help in such cases where the voter is conscious enough to want to exercise the right to a secret ballot. To accommodate such a possibility technically, a link between the ballot and the voter has to be maintained until the final verification. The verification of whether the ballot is to be counted or if it is overridden by a later vote has to be done first. In the case the Internet vote is to be counted the link between ballot and voter is broken for good, and only then the vote can be counted. Such a system can maintain the secrecy of the vote provided any manipulation by insiders can be ruled out.

Should uncontrolled voting be common it is extremely important that strictly controlled polling stations are available on Election Day for all those who choose to cast a vote in guaranteed secrecy. The danger by a successful introduction of uncontrolled voting is that there is an administrative pressure to reduce the number of polling stations. One may also experience a more relaxed secrecy within the polling stations since the officials would know that the votes are generally not secret any more, even though the need is for more not less control in the polling stations.

A measure which is taken by some countries is to require that the voter, and sometimes even witnesses, sign a statement confirming that the vote is a personal one and that the ballot is cast in secrecy. There may also be penalties to any violations of the secrecy. Such measures may have an effect in particular in cases where the voter wants to protect the vote. To what degree it also effect the less conscious uncontrolled voting may be much more uncertain.

If and when voting in uncontrolled environment becomes an offer to all voters the role of the schools, election administrators and NGOs in educating new generations in the secrecy of the vote will be of paramount importance. Without the direct illustration provided by voting in a polling station the educational challenge will be tremendous.

4.5 Alternatives to Voting in Uncontrolled Environment

The main reason for introducing postal and Internet voting is to strengthen the participation in elections – either by reversing a negative trend or by even increasing the election turnout. In addition in particular Internet voting has attractive features by providing an immediate and reliable count and the long term costs may be reduced.

Some of these effects may be achieved by introducing the same IT based technology but by making it available only in controlled environment. Voters could be offered extensive possibilities for early voting in controlled environment where the secrecy of the vote is guaranteed. In addition there would be staff available to supervise in the use of the Internet, and even paper ballots may be offered.

For young people such an alternative may still be attractive even though the availability arguably would be less than an Internet service accessible from home. An electronic possibility for controlled early voting would have the same advantages regarding the speed and accuracy of count as regular Internet voting. The costs may be higher, though, since the offer is dependent of staff.

Compared to postal votes electronic voting (both controlled and uncontrolled) would have one big advantage in countries where the time from an election is announced to the election day is short, e.g. in the UK. Electronic voting would reduce the turnaround time now being used for requesting a ballot, printing, distributing ballots and returning them, and the time people can actually cast an early vote would be longer. A controlled electronic early vote may therefore have at least the same effect on turnout as the present postal vote system.

Early voting arrangements even in controlled environment have been criticised by international observer missions to for example Belarus. The basis has been the lack of transparency, pressure on voters to cast an early vote (which 31% of those voting did in the 19 March 2006 elections) and the shortcomings in the records kept from the process⁸. However, early non-controlled voting would represent a much higher risk to the integrity of the vote wherever the election management body does not enjoy full confidence from all parties involved.

5 Conclusions

Voting by mail has become common for groups who would otherwise be disenfranchised. A few countries have adopted postal votes as a choice for any voter. Voting by Internet is implemented in few countries and is being planned by more. Serious security issues and concerns of trust and transparency may be solved, at least in countries where the elections management body is above any doubts regarding their integrity. However, the secrecy of an uncontrolled vote cannot be guaranteed. Even if there is a possibility to regret an uncontrolled vote and vote again in a polling station on election day, the free choice may be only theoretical for groups of voters.

⁸ See the OSCE/ODIHR statement of preliminary findings issued on 20 March 2006 on the Belarus Presidential elections.

Before Internet voting is opened for the whole electorate governments and inter-governmental organisations should have a thorough discussion about the possible effects of the lack of secrecy of the vote. By the development towards more voting from home the concept of election may change without a real discussion of how that may weaken the voters' consciousness of a secret and personal vote. The lack of protection may not only involve common risks of intimidation and trading of votes, but it may lead to less understanding of the personal aspect of the vote for large groups and young voters may in particular lose out on the educational aspect of a secret, controlled vote.

In this discussion early voting in controlled environment readily available to all voters with the most modern technology may be seen as an attractive alternative. Such alternative may offer the same efficiency and accuracy in the results tabulation, it may offer modern user interfaces, but it will require more people and possibly be more expensive to maintain.

Literature

- [NO00] Working Group under the Norwegian Ministry for Local Government: Elektronisk stemmegivning – utfordringer og muligheter. Kommunal- og regiondepartemenet. Oslo 2006. www.dep.no/krd/norsk/dok/andre_dok/rapporter/016051-220023/dok-bn.html.
- [UK01] Electoral Commission of the UK: Turnout. How many, who and why? London 2005.
- [CE02] Council of Europe. Recommendation adopted by the Committee of Ministers on 30 September 2004 at the 898th meeting of the Ministers' Deputies. Rec (2004) 11.
- [CE03] Council of Europe. Report on the compatibility of remote and electronic voting with the standards of the Council of Europe. Adopted by the Venice Commission at its 58th Plenary Session. Venice 2004.
- [OD04] OSCE/ODIHR: Elections Observation Handbook 5th edition. Warsaw 2005.
- [KV05] Vollan, K: Observing Electronic Voting. Norwegian Institute for Human Rights. University of Oslo. NORDEM Report No 15/2005. www.humanrights.uio.no/forskning/publ/publikasjonsliste.html#nr
- [KV06] Vollan, K: Zimbabwe: Presidential Elections 2002. Norwegian Institute for Human Rights. University of Oslo. NORDEM Report No 05/2002.
- [KV07] Vollan, K: Zimbabwe: Parliamentary Elections March 2005. Norwegian Institute for Human Rights. University of Oslo. NORDEM Report No 11/2005.
- [OB08] Oostveen, A-M and P. v. D. Besselaar: Security as Brief. User's perceptions on the security of electronic voting systems. ESF TED Conference on Electronic Voting.
- [BI09] Election Court in Birmingham: In the matter of a Local Government Election for the Bordesley Green and Aston Wards of Birmingham City Council Held on 10 June 2004. The Court's judgment. Birmingham 2005.

