

E-voting in Belgium

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Pour une Ethique du Vote Automatisé
Voor een Ethiek van de Verkiezings Automatisering

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Principles of democratic elections

- We think elections can only be democratic if they are controlled by the people
- Transparency of the traditional voting system permit this control
- If an effective audit can not be accomplished by normal citizens during the election then it is not democratic
- The use of experts that must be trusted is not a valid replacement for citizen control
- Audit needs to be accomplished by normal citizens, not by experts nor representatives of the power in place.

E-voting in Belgium

- Belgian E-voting experiments began in 1991
- PC based semi-DRE using magnetic cards
- In 1994 it covered 20% of the electorate
- In 1999 it covered 44% of the electorate
- Status quo since then (today still @ 44%)
- VVAT experiments in 2003 (not continued)
- Scanning of paper ballots exp in 1999, 00, 03
- Protest from 1994 onwards (PourEVA)
- System will be unusable after 2008
- What will happen after 2008 ?

eVoting without paper is moving backwards

- Study gives impression eVoting is in progress in Europe while the opposite is true
- No eVoting in Ireland but 7000 machines acquired and 53 Mj Eur wasted
- Netherlands did stop every eVoting after the report publication
- Belgium is the only European country with eVoting over 10% of the voters
- No European countries with eVoting > 50%
- Majority of countries have no e-voting at all
- Many countries draw away from eVoting
- In France many localities did stop eVoting

eVoting without paper is moving backwards

- Internet voting experiments suspended at this time in both Netherlands and France
- Alnauye decided last week to abandon eV
- Hamburg abandoned the "Digital vote pen".
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First part of study is often incomplete + already out of date

- Study gives impression eVoting is in progress in Europe while the opposite is true
- Strong bias in favor of eVoting - Many painful events are not reported (like the situation in Ireland, errors in Belgium)
- Uncomplete evaluation of existing Belgian system. Largely incomplete reporting of problems.
- Report not neutral and thus not usable as a sole basis for the parliamentary discussion.

Actual (old) belgian system should not be used any more

- It can not be observed by normal citizen.
- It can not be externally and independantly audited.
- Rely on trust and invisible things
- Does not conform to recommendations CoE
- Does not conform to recommendations of OSCE.
- Does not respect the resolution of the Brussels Parliament
- Consortium Study confirms enhancement is needed and recommendations are not met.

Actual (old) belgian system should not be used any more

- Hardware is old and uses unreliable and unprotected media (unprotected floppies)
- The security of the system rely on the trust on experts and respect of the procedures
- However, Procedures are not respected
- Conclusion: This system should not be used any more under no circumstances.
- NL already made similar decision
- M Bijleveld was respected for that decision

eVoting cost are very high compared to the benefits

- Expensive machines serve less than one day per year (!) - Not cost efficient.
- High costs for repair technician crews stand by on election day
- Costs at least 3 times higher than paper voting and can be expected to rise
- Not many actual benefits: Provisional results arrive faster (when they arrive), Less citizen participation in the election (also reduces the participation and confidence).

Belgian e-voting cost



eVoting bad for earth

- Voting machine last only 10 years
- Are used only 8 times before being discarded
- records only $133 \times 8 = 1064$ votes in entire life
- recycling of complete machine plus the energy consumed to build a new machine is heavy burden on the environment
- much more burden than 1064 ballot papers.

What is wrong with the improved paper-based voting system?

- The human readable vote should be the only valid vote
- RFID is not acceptable
- Does not respect the secrecy of the vote from non Belgian elector
- Printing should be done on standard (A4) paper size
- Paper can be folded normally, must be inspected by people in counting center.
- Unnecessary encryption of the computer readable version of the vote

What is wrong with the improved paper-based voting system?

- Comparing the human readable and computer readable version of the vote is not enough to audit the election
- Usage of the token should be questioned
- No need for separate reading / decryption / totalisation centers. Counting station should combine these functions and release intermediate result to the public.
- Sending intermediate results does not need encryption

What is wrong with the improved paper-based voting system?

- Only provisional results should be transmitted electronically, paper transmission to follow
- No procedure for systematic partial manual recount with comparison to eVote result
- No need for reader next to first ballot box
- No safeguard against multiple scan of same ballot ?
- No measures against known radiation emissions of touch screens (TEMPEST) ?
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Varia

Provision in the law for national (and international) non partisan observer ?

Trust the citizen and partisan observer or trust the organiser ?

Local publication of the counting result before transmission ?

Secrecy of the vote with multiple vote ?

Moving of the ballot box ?

Transparent ballot box ?

DIXIT

Thank you for your attention

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Ce ne sont pas ceux qui votent qui décident,
mais bien ceux qui comptent les votes

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