Electronic Voting System: the case of Belgium

Belgian Ministry of Interior – Elections Unit (www.rrn.ibz.fgov.be):

Stéphan DE MUL
Henri SNYERS
David VAN KERCKHOVEN

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The Belgian voting system

The Belgian electronic voting system

The future of electronic voting in Belgium
The Belgian Electoral System

- 1830-1893: voting system based on a poll tax
- 1893-1919: universal suffrage tempered by the plural voting
- 1919-1948: universal suffrage for the men
- Since 1948: plain universal suffrage (men-women)

- 1893: compulsory voting
- 1899: majority system ----> proportional representation
Why?
   a) Political and historical considerations
   b) Philosophical considerations

   Principle
   Sanctions

   Temperance: vote by proxy

   Turnout: 91%
4 conditions:

1. 18 years old

2. Inscribed in the registers of population of a Belgian municipality (of register of an Embassy for federal elections)

3. Belgian (for local elections: also European and not European with 5 years of residence in Belgium)

4. Not excluded or suspended from the right to vote (prison sentence of at least 4 months)
Voter’s list

- **When?** : 80th day before elections (Federal)

- **Who?** The persons who are inscribed in the registers of population of the municipality and who fulfill the conditions are automatically on the voter’s list and will receive a notification to go to the polling station
Eligibility

4 Conditions:

1) Belgian (European for local and European elections)
2) enjoying civil and political rights
3) 21 years: Europe – Senate – Chamber
   18 years: Regions – province - municipality
4) living in Belgium (European Union for European elections)
Electoral offices

Principal constituency office (presentation of candidates + division of the seats and designation of those elected)/Principal college office (S)

→

Principal cantonal office (designation of the members of the vco and ps + results of the canton)

→

Vote counting office (< 2.400 ballot papers)

→

Polling station (150 to 800 voters)

In june 2007 : 10.617 PS and 4087 VCO (no vco with electronic voting)
Vote counting office + Polling station

- **VCO**: 1 chairman + 4 assessors (appointed by the president of the principal office among a list of persons who have a certain job: judge, lawyer, civil servant, teachers,...) + 1 secretary (choice of the chairman) + witnesses of political parties

- **PS**: 1 chairman (idem VCO) + 4 assessors (appointed among the voters of this polling station) + 1 secretary (choice of the chairman) + witnesses of political parties
Voting operations

- The municipality is responsible for the equipment of the polling stations

- On Sunday
  (8.AM to 1.PM and 3.PM for electronic voting)

- The way of voting:
  - Vote for a list if you agree with the order of the candidates
  - Nominative vote: if you want to change the order of the candidates on the same list
Validity of the elections

- Each assembly take a decision concerning the validity of the election (separation of powers):

  House of representatives, Senate, regional parliaments
  House of representatives for Europe

- Municipal elections: first instance → the executive of the province + appeal before the Council of State
The Belgian electronic voting system: gradual introduction

- **1991**: Verlaine (Jites) and Waarschoot (Nedap)

- **1994**: Arr Antwerp (Digivote 1), Arr Liège (Jites 1)
  + Waarschoot (Digivote 1), Verlaine (Jites 1)
  + Brussels (3 cantons Digivote 1 + 1 Jites 1)
  + German Community (Digivote 1)

- **1999**: Digivote 2 (Flandres + Brussels),
  Jites 2 (Hasselt, Lens, Durbuy)
  + optical reading
  (abandoned after elections 2003)

- **2003**: experiment ticketing
  (abandoned after elections 2003)
The Belgian electronic voting system: gradual introduction

- UNTIL 1995: 1,250,000 ELECTRONIC VOTERS ON THE 7,300,000 VOTERS (20%)
- SINCE 1999: 3,250,000 ELECTRONIC VOTERS ON THE 7,500,000 VOTERS (44%)
The Belgian electronic voting system: overview

Le vote automatisé en Belgique
Advantages of the electronic voting system

- Introduction of new technologies in the electoral process
- Number of members in the voting counting offices and the polling stations
- Cost
- The vote and the counting are easy
- Quick results
PREPARATION / DISTRIBUTION

Flow

Chairm. Canton

pw

Canton HQ

pw


pw

Polling stations

COUNTING
Control: Id + Voter’s card

VOTING MACHINE

Organized within TRAIN DEV.NET

In collaboration with: CIDA, IOM, OAS
Security

- MI = owner software
- Voting machines are checked -> twice before Electionday
- PC Chairman + Voting machines: only magnetic card reader and floppy (no harddisk, ...)

- Very accurate voter’s list (one voter / one vote)

- System is loaded on Electionday / Standalone PC’s
- Use of Password (in secured envelop)
- Ballot box is sealed (seal is numbered)
Security

- Reference Votes (begin, end, by repair)
- Never connection between Voter and Expressed Vote
- All sensitive data are encrypted
- Voter can visualise his vote (but no change possible)
- SLA’s: voting machine 2 Hours – ballot box ½ Hour

- Recounting always possible (magnetic cards)
STERIA : DIGIVOTE EQUIPMENT

CHAIRMAN

VOTING MACHINE
COUNTING STATION

Flow

- Control
- EID
- Result
- pw
Transparency

- Source Code distributed to Political Parties
- Source Code on the Internet
- Possibility to exercise (Voter) on the Internet
The future of electronic voting in Belgium

- Accord de coopération du 14 juillet 2005

- Etude des normes techniques et organisationnelles pour un nouveau système de vote électronique > 31/12/2008

- Etude universitaire :
  - Systèmes électroniques dans le monde
  - Concept d’un nouveau système “idéal” pour la Belgique
The future of electronic voting in Belgium

- Résolutions de la Chambre et du Sénat des 10 et 18 juillet 2008:
  1. Possibilité d’utiliser Jites et Digivote en juin 2009
  2. Expérimentation d’un nouveau système de vote électronique en 2009
  3. Extension du nouveau système de vote électronique après 2009
The future of electronic voting in Belgium

- Test de 20% du *hardware* dans chaque commune

- Volonté des communes :
  201/201 : accord pour utiliser leur système en juin 2009
The future of electronic voting in Belgium

- Decision CM du 25 juillet 2008:
  - Signature de l’accord de coopération avec les Régions qui le désirent
  - OK de la Région flamande

- Lancement de l’avis de marché (1/9 au BA et 3/9 au JO de l’UE)
  – procédure négociée
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Thank you very much for your attention

Questions?

Stéphan De Mul
stephan.demul@rrn.ibz.fgov.be

Henri Snyers
Henri.snyers@rrn.ibz.fgov.be

David Van Kerckhoven
David.vankerckhoven@rrn.ibz.fgov.be

Elections Unit
Belgian Ministry of Interior