

ibz Intérieur  
Binnenlandse Zaken

16 September 2010

**Electronic Voting System: the case  
of Belgium**

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► **Belgium**

- **Federal state**
  - +/- 10,3 million habitants
  - +/- 7,6 million voters
  - Obligation to vote
- **3 Regions**
  - Flemish Region – 6 million inhabitants
  - Walloon Region – 3,2 million inhabitants
  - Brussels Region - 1 million inhabitants
- **3 Communities** (Dutch – French – German)

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## ► Elections

- **Federal elections: Senate and Chamber of Representatives**
  - 4 years
  - Organized by Federal Ministry of Interior
- **Europe and Regions**
  - 5 years
  - Organized by Federal Ministry of Interior
- **Province and municipality elections**
  - 6 years
  - Organized by Regions

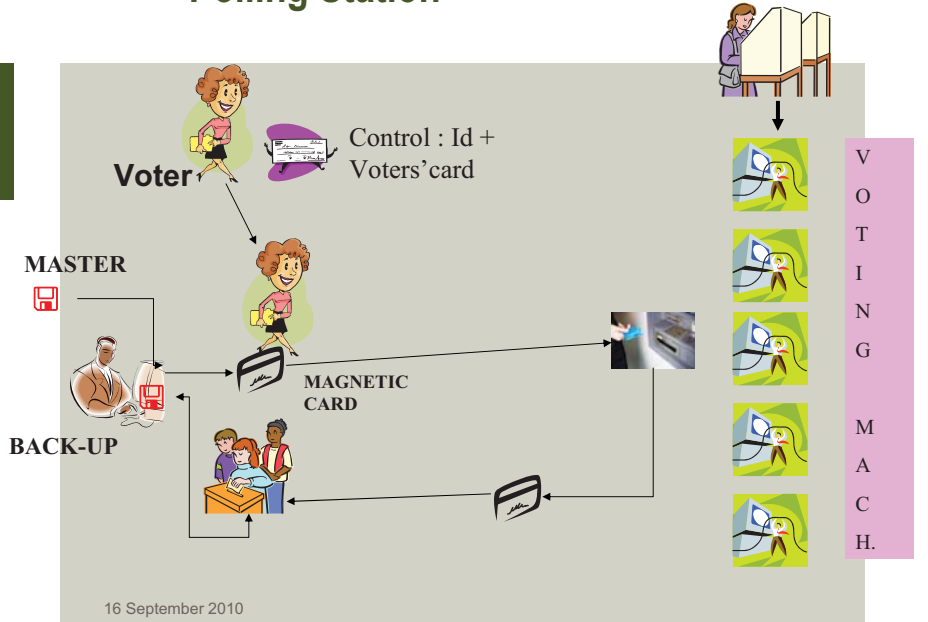
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## ► Evolution Electronic voting

- **1991: 2 cantons – 20.000 voters**
- **1994: 1<sup>st</sup> generation – 1,4 million voters**
  - Contract for 10 years until 2004
- **1999: 2<sup>nd</sup> generation – 3,4 million voters**
  - Contract for 10 years until 2008
- **2005: upgrade 1<sup>st</sup> generation**
- **2007: 44% electronic – 3,4 million of 7,6 million voters**
  - Flemish region: 50%
  - Walloon region: 20%
  - Brussels: 100%
- **End 2008: end contracts electronic voting**
- **Prolongation June 2009**
- **Unexpected elections 2010**

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## ► Polling Station



## ► Digivote Equipment

**CHAIRMAN**



**VOTING MACHINE**



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## ► Jites Equipment

Chairman



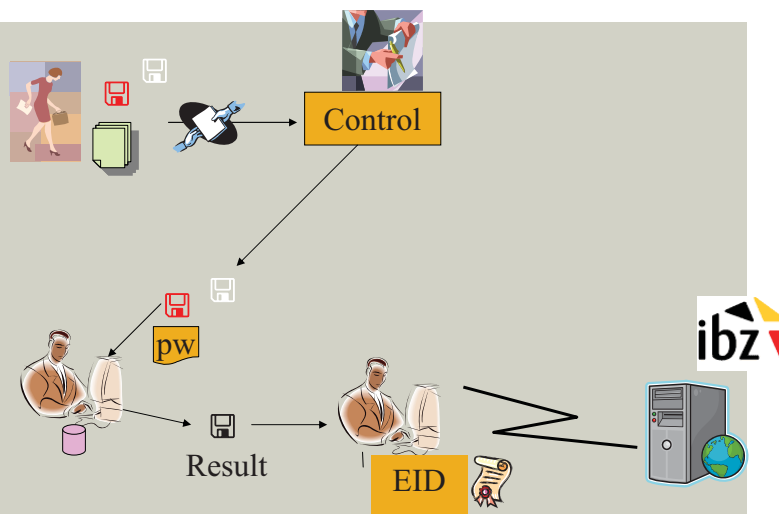
Voting Machine



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## ► Totalization

Flow



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## Why electronic voting?

- **New technologies**
- **Reduce the number of assessors**
  - 8.000 citizens per election (2 elections/day)
- **Cost**
  - Paper : 1,6 €/voter/election >< electronic : 4,2 €/v/e
- **Results**
  - 5 hours before paper

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## ► Security

- **Ministry of Interiors = owner software**
- **Check voting machines → 2 X before e-day**
- **PC chairman + Voting machines: no harddisk, only magnetic card reader and floppy**
- **System load on Election day**
- **Standalone PC's, no network**
- **Password, secured envelop**
- **Ballot Box sealed (seal is numbered)**

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## ► Security

- **Reference votes (begin, end, by repare)**
- **Never connection between Voter and Expressed Vote**
- **All sensitive data are encrypted**
- **Visualization (no change)**
- **SLA:**
  - Voting machine: 2h
  - PC chairman: ½ h
- **Possibility recount (magnetic cards)**

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## ► Transparency

- **Before election day:**
  - Source code → Political Parties
- **After election day:**
  - Source code → Internet
- **College of experts**
- **Observation**
  - OSCE federal elections 2007  
([http://www.osce.org/documents/odihr/2007/10/27430\\_en.pdf](http://www.osce.org/documents/odihr/2007/10/27430_en.pdf))
- **Exit-poll in 2003 : acceptance (95%)**

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## ► The future of electronic voting in Belgium

### ➤ Study of consortium of Belgian universities ([www.ibz.rrn.fgov.be](http://www.ibz.rrn.fgov.be) → Bevoting)

- 2 parts :
  - Comparative study “Electronic voting in the world”
  - “Best” system for Belgium :
- Voting system + paper trail with barcode
- Scanning barcodes

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## ► The future of electronic voting in Belgium

### ➤ Debate in the parliament :

- *« Invite également le gouvernement à organiser dans les cantons ou les communes qui le souhaitent une expérience de système de vote électronique amélioré, dans le cadre de laquelle l'électeur reçoit une copie papier pour le contrôle de son vote, ou une autre expérience de vote automatisé dans le but de renforcer les garanties de contrôle démocratique tout en maîtrisant le coût budgétaire global ».*

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## ► The future of electronic voting in Belgium

### ➤ Public Tender (September 2008)

- Examining offers
- Negotiations
- Decision

### ➤ Contract with the firm

- Prototype
- Experiment
- Political decision
- Trial 2012?

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**Thank you**

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