



Electronic Voting System : the case of Belgium

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

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Belgium

- ☐ **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



Compulsory voting



☐ Why?

a) Political and historical considerations

b) Philosophical considerations

☐ Principle

☐ Sanctions

☐ Temperance : vote by proxy

☐ Turnout : 91%



The franchise



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
(abandonned after elections 2003)
- ❑ **2003** : experiment ticketing
(abandonned after elections 2003)



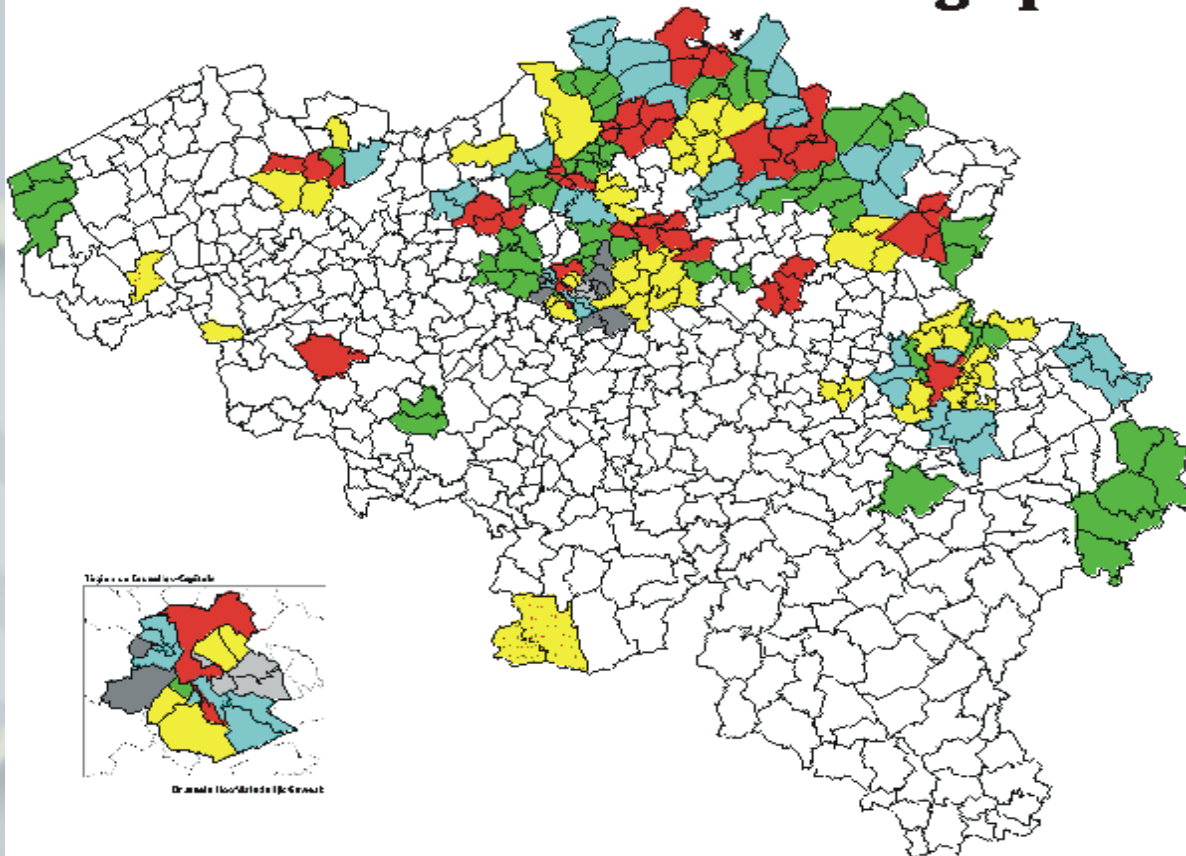
The Belgian electronic voting system : gradual introduction

- ❑ 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



PROCEDURES

Players

DIGIVOTE

JITES

SUPPLIERS

Change Mgt.

Anal.



Softw.

Indepent Control
Org.

College of Experts

Report

Softw.



Banksafe

Owner
Softw.

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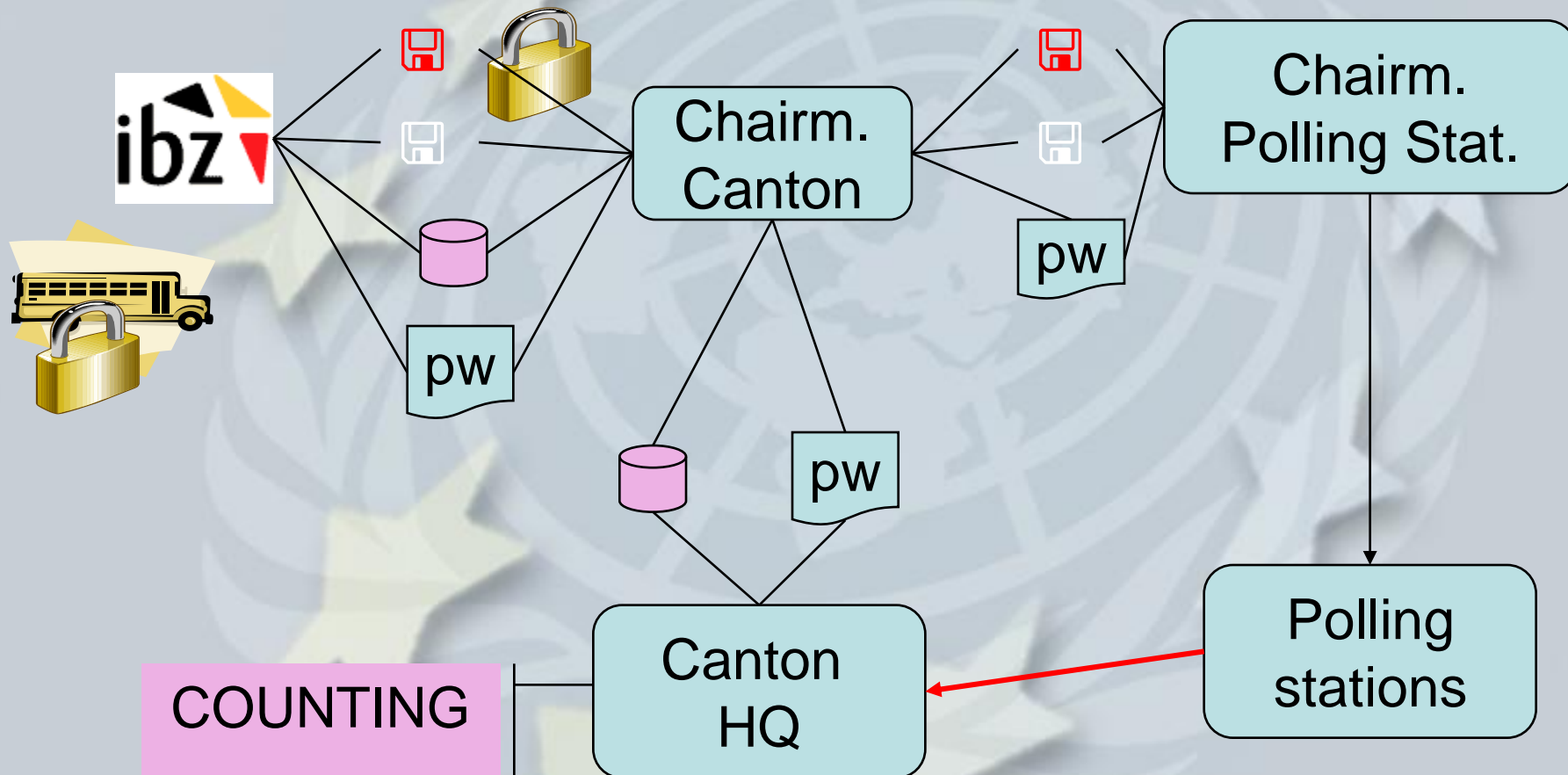
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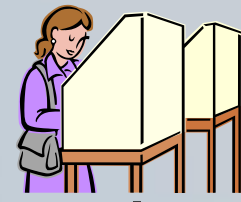
PREPARATION / DISTRIBUTION

Flow





POLLING STATION

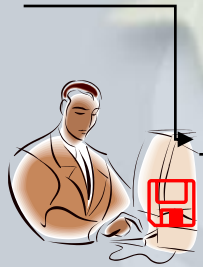


Voter



Control : Id +
Voter's card

MASTER



BACK-UP



**MAGNETIC
CARD**



V
O
T
I
N
G

M
A
C
H.



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 repare)
- ☐ **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 1/2 Hour
- ☐ **Recounting always possible** (magnetic cards)



STERIA : DIGIVOTE EQUIPMENT

CHAIRMAN



VOTING MACHINE



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STESUD : JITES EQUIPMENT

Chairman



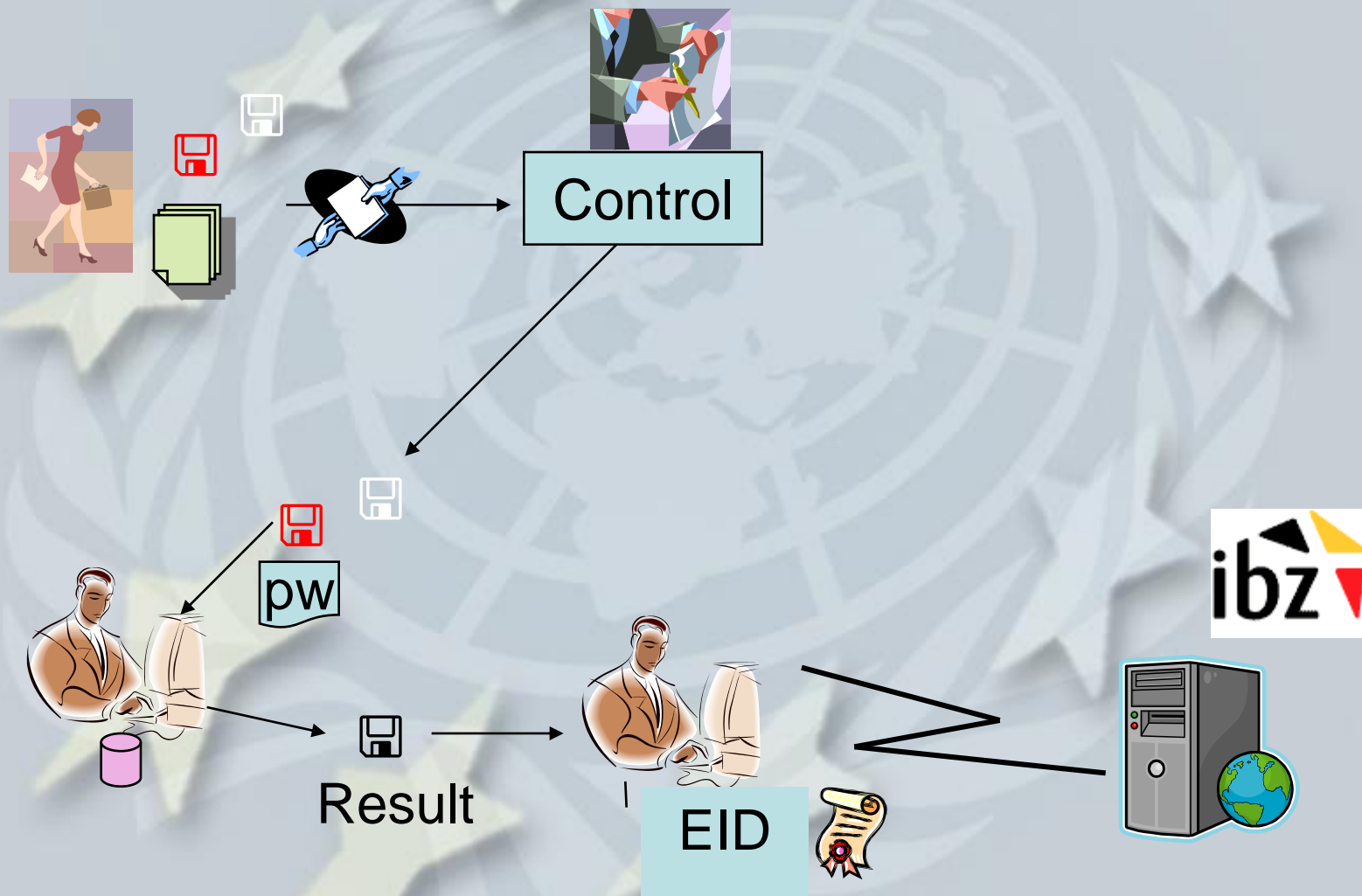
Voting Machine





COUNTING STATION

Flow





Transparency



- ☐ Source Code distributed to Political Parties
- ☐ Source Code on the Internet
- ☐ Possibility to exercise (Voter) on the Internet

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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

❑ Décision 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?

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