

# Election Systems

What is happening in Europe



## N.V. Nederlandsche Apparatenfabriek “NEDAP”



A know how driven company  
from the Netherlands:



■ Founded in 1929 in  
Amsterdam

■ Corporation since 1949

■ Location: Groenlo NL

■ Turnover 1999:  
106.5 Million Euro

■ ca. 656 employees

**More than 30 years experience in voting machines**

### Mission

**Designing and producing Election Systems for the international market, to assist civil servants to perform their tasks preparing and executing elections and publish the results**



Machine for south Germany



Biometric activated machine



Electronic system for elections



# Nedap Election Systems

- First mechanical machines in 1968
- First generation electronic machines 1972
- Third generation machines 1991
- Reach 70% market share in the Netherlands by 1998

# What is happening in Europe

- Besides a few countries Europe is pretty much sticking to voting by means of ballot paper
- Napoleon introduced population registration on the continent, so the voters register is not a problem we encounter except in the UK

# What is happening in Europe

- The countries where voting machines or computers are used or where experiments has taken place are:
  - The Netherlands
  - Belgium
  - France
  - Germany

# What is happening in Europe

- The countries where voting machines or computers are used or where experiments has taken place are:
  - United Kingdom
  - Norway
  - Ireland

## What is happening in Europe Internet voting

- Strong lobby from telecom companies and smart card industry and consulting companies
- European and national subsidised development for Universities of techniques like:
  - encryption
  - identification
  - biometrics



# What is happening in Europe

## Internet voting

- In these experiments social political aspects are not taken into account
- however the fact that one should be able to vote unobserved and free of influences only leaves internet voting from polling stations and kiosks as a possibility

# The Netherlands

- Up till now generally 1 election at a time in rare occasions 2
- Proportional representation up to 26 parties with total one choice to make out of maximum 1100
- A uniform election system all over the country

# The Netherlands

- average frequency once a year, 2 years 4 elections then 2 years non
- Parliament
- province
- town plus ward counsel
- Europe

# The Netherlands

- The towns buy the machines
- elections are conducted by the civil servants with help of volunteers
- funding comes out of a business like budget system where every department is charged for costs from other departments



# The Netherlands present market situation

- 70% Nedap full face machine
- 10% former competitor full face machines
- 3% PC based touch screen voting machines
- 17% ballot paper voting

# The Netherlands Experience

- No loss of votes with propriety full face machines
- no lower voter turn out with full face machines
- 2 till 3% lower voter turn out if using PC based systems

# Belgium

- Cities by the systems
- From 1991 onwards installation of a non DRE type PC based voting system
- operation of the systems with help from industry

# Belgium Experience

- voting is obligatory so no figures on voter turn out
- technical and organisation problems
- October 2000 discussion to abolish the system



# France Experience

- Some real tests are performed:
  - with full face machines in Strasbourg ending in a success
  - with minitel internet avant la lettre ending in a disaster

# Germany

- Ownership by the cities
- no budget system so difficult to have funding
- internet is seen as a solution for their expensive absentee mail vote system US\$ 5 per voter misused by 20% of the voters

# Germany Experience

- Successful use of full face DRE
- Cologne 740 precincts has already performed 7 elections

# UK Experience

- Successful use of full face DRE
- tests with other systems less successful  
reports available on the internet
  - <http://www.homeoffice.gov.uk/ccpd/cnu/evalstra.doc>
- London central scanning combined with a new election system 30% spoiled ballot papers

# Norwegian situation

- Several elections with central scanning
- now actual information on the performance

# Ireland

- After a thorough study the Irish has selected full face systems
- The election system is complicated as each candidate can get a number in order of preference
- even more complicated is the determining of the result in this proportional representation single transferable vote system

# Nedap Election Systems

- Successful test elections Waarschoot Belgium 1991
- European Elections Strasbourg 1992
- Nationwide certification European and Federal elections 1999 for Germany.
  - The City of Cologne, more than 740 polling stations, concluded its 7<sup>e</sup> successful election by October 2000



# Nedap Election Systems

- Successful election in Stratford upon Avon UK in May 2000
- Invitation USA Office of Election Administration Federal Election Commission January 2000
- Preferred supplier for the study committee Ireland 2000