European Commission
United Nations Development Programme
International IDEA

Introduction to e-voting
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Introduction to Electronic Voting

- Two main categories of e-voting
- E-voting in controlled environments (EVM or DRE voting)
- E-voting in uncontrolled environments (internet voting, PDA or mobile telephone voting)
Internet voting is being piloted in more than 30 established democracies

Estonia, October 2005, first country-wide elections with the possibility to vote through internet

Tests on Internet voting have not given yet a definite answer on how to ensure the secrecy of the vote and eliminate the potential coercion exerted on remote voters

Internet voting will soon be available for countries which enjoy a deep trust in their respective EMB and have a relatively conflict-free society, where the secrecy issue has a more limited weight than in other younger democracies, where the trust in the institutions and in the EMB might not be a given.
More than half billion voters in the world already use this form of voting in two of the most populous world democracies (India and Brazil).

Does not present the same range of advantages normally attributed to uncontrolled internet e-voting (better turnout, enable voters’ mobility, facilitate disadvantaged categories).

It does not endanger the fundamental requisite of the secrecy of the vote.

It does offer some important answers on the issue of transparency through a development of various forms of auditing mechanisms. Possibility to introduce Voter Verified Audit Trails (VVATs).

Increase in requests by EU partner countries.
Indian Voting Machines

- Two sub units, control and balloting
- Linked with 5 meter long cable
- 7.5 volt single alkaline battery
- Provision for conventional ballot paper
- Voting by pressing button *instead* of marking.
- Can be used for 64 candidates and 3840 voters.
- No provision for invalid votes
Indian Voting Machines
Control Unit Details

- Manned by the PS Chair
- Displays the number votes who voted
- Informs the PS Chair of when the voter has voted
- Get the results by pushing the results button
US voting machines 2
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ELECTORAL LOGISTICS IN A COUNTRY OF 8.547.403,5 km²
ELECTORAL LOGISTICS IN A COUNTRY OF 8,547,403.5 km²
1st Stage
Public debate, surveys, debate with political parties. Planning design, parameters identification and related actions

2nd Stage
Developing a sense of ownership within the electoral management body and its territorial structure of the informatization process
Digitalization of the voter register

3rd Stage
Establishment of the IT Development Committee for the electoral process. Feasibility studies and hardware and software development plan.

4th Stage
Public international tender. Hardware acquisition and software development

5th Stage
Development of the electronic ballot box prototype, piloting, feasibility tests
Final decision on the model

6th Stage
Quality control- on site and laboratory test, field simulations

7th Stage
Implementation in 1996 elections ad post-elections audit. Development of permanent training plan

8th Stage
Gradual introduction of e-voting machines throughout Brazil 1996-2006

Introducing e-voting - The 8 steps
Brazilian Voting Machines
Brazil Case – the Process

Voting Station

- Printing the results
- Disk
- Transmission by ZE'S

Data communication

- Totalization TRE
- National Consolidation TSE

Results via INTERNET

Organized within TRAIN DEV.NET

In collaboration with: CIDA, IOM, OAS
The Brazilian case – Some considerations

- “A Brazilian solution to a Brazilian problem”. The customization is the key

- The trust is the Brazilian EMB was such that they could do away with the paper trail. The transparency has never been an issue

- An enormous and continuous investment

- Emphasis on professional development, civic education and ownership

- Can it be exported?
The Venezuelan case – background

- The EMB is a constitutional power, well resourced and staffed
- High political polarization
- Lack of trust in the EMB
- E-voting as a measure of fraud prevention – “para matar el acta mata voto”
- Limited emphasis on professional development, civic education and ownership
The Venezuelan voting machines

- Touch Screen to support multiple electoral races
- Printer Attached to produce VVAT
- Two memories available
The Venezuelan context

- High level of mistrust in the EMB from various sections of the society

Introduction of a number of transparency measures to obviate the luck of trust

Massive effort in the VVAT allowed the EU EOM to express a solid evaluation on the genuineness of the results
The Venezuela Paradox

- The extreme sophistication and high reliability of the voting system does not make up for the lack of trust in the EMB among several stakeholders

- The huge investment in technology has not been yet matched by a similar effort in capacity building and voter information

- The higher the distrust in the EMB, the higher the need for transparency and security measures
Main consideration in favour of e-voting

- Longer-term cost reduction
- Speed and accuracy of the results
- Potential turn-out increase
- Fraud prevention
Main consideration against e-voting

- Lack of transparency
- Increased training and voter information needs
- Vendor “dictatorship”
- Increased potential for central manipulation
Issues for Discussion

- There is an inverse relationship between the degree of sophistication and security measures applied to EVMs and the degree of trust enjoyed by the EMB.

- The key role played by independent auditing procedures.

- What role observation can play in electoral processes using e-voting in controlled environment?

- E-voting in controlled environment with touch-screen machines producing VVAT appears to be the most reliable and transparent way forward for e-voting in developing countries. It will not be the cheapest option.