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Introduction to Electronic 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)
E-voting in uncontrolled environments

- 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.
E-voting in controlled environments

- More than half billion voters in the world already use this form or 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
Indian Voting Machines – Balloting Unit Detail

• 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 1
US voting machines 2
Brazilian Voting Machines
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
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.