General Overview

In general, the meeting participants agreed that electronic voting represents only one, albeit a central, aspect of a broader electoral and political process. Inevitably, because of the nature of the technology, electronic equipment places limits on an observer's capacity to detect fraud. On one level, election technology has to be trusted. Still, traditional observers are far from obsolete. The physical presence of observers can deter some aspects of electronic fraud and provide legitimacy to an election outcome if it is deemed free of irregularities. While a high-level of technical expertise is needed to check equipment for sophisticated fraud (e.g. the presence of spyware[1], Easter eggs[2]), there are measures that observers can and shoul4.52erver

counting, transmission, and tabulation of results can be subject to human error or intentional manipulation.

- **Mechanical lever system**: Voters lower a lever next to the name of a candidate. The programming of the mechanical levers is very simple, making it attractive as a voting technology. Yet that same simplicity also poses problems. Levers can be programm

Automated voting and election observation

Four distinct phases of the electoral process are affected by automated voting: ballot marking, vote recording, vote transmission, and tabulation of the voting results. All four stages pose independent challenges to election observers.

As mentioned above, even though the ballot marking and vote recording stages are conflated on DREs, the marking stage differs from the recording phase in that a machine's recording may not necessarily reflect how the voter intended to mark the ballot. In principle, the more aggregated DREs are, i.e., the more election phases are handled by one machine, the more difficult observation becomes. The secrecy/transparency dilemma inherent in DREs means that achieving total security and drawing an unequivocally clear demarcation line between human error, computer error, and outright fraud is only possible through the unacceptable surrender of voter secrecy.

Nonetheless, election observers can focus on specific steps undertaken at several points in the electoral process in order to determine whether authorities have done their utmost to maximize security, and to minimize the potential for fraud before, during, and after election day. These include:

Pre-election:

- Voter education
  - Á Observers can verify whether voter education encouraged voters to verify their selection before finally casting their ballot.

- Transparency of software and :

have been printed out by the voting machine, so that aggregated results may be compared against it.
  - Á Check position of voting units: are units positioned so as to guarantee voter secrecy? Are they away from direct sunlight, so that the writing on the screen is clearly legible?
  - Á Observe that procedures are being followed:
    - o to prevent electronic stuffing.
    - o to allow voter verification (where possible).
    - o to allow parallel testing (where allowed).

- During counting and tabulation:
  - Á Check number of voters against voter list and electronic tally.
  - Á Review precinct results in order to perform statistical verification of results.
  - Á Observe delivery of the voting materials (electronic media and paper records).
  - Á Where there is a paper trail, carry out sampling and "hot audits."

Post-election:

- Assess the quality of post-election tests:
  - Á Check whether procedures were followed.
  - Á Consult with technical experts.

Conclusions and next steps

Clearly, automated voting poses new challenges for election observers. In order to meet these challenges, observers need to adopt a two-pronged approach: First, they will have to rely on a core team of IT experts, ideally working as long-term observers to assess the technical aspects of electronic voting equipment. Second, observers sted

- Observers need technically skilled long-term observers to observe pre- and post-election tests.

Whereas the Carter Center conference offered the opportunity to consider many of the issues surrounding automated voting and election observation, many other questions remained unanswered and could form the basis for future meetings. The growing use of automated voting systems adds new dimensions to election observation, and raises important questions such as what are the minimum criteria for election observation of automated voting systems and what can be done to promote greater understanding among observers, election officials, vendors, academic experts and legislators?

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