THE AUTOMATED ELECTION SYSTEM SECURITY ISSUE: UV Lamp & Ballot Security

COMELEC's lack of project management skills and required technical knowledge (even at minimum so as to understand the intricacies of printing) is very evident in its handling of the printing of the ballots and ensuring that the required security feature is present. There was no need to disable the ultraviolet security mark sensing in the PCOS.

Republic Act 9369[1] (RA9369) mandates that the ballots shall have sufficient security features[2] in order to prevent the use of fake ballots.

The Request for Proposal[3] (RFP) issued by the Commission on Elections for the Automated Election System Project echoed the mandate of the law.

Smartmatic responded by proposing features in the Precinct Count Optical Scan that will detect ultraviolet (UV) security marks on the ballot and read barcodes printed on the ballot. The barcode on the ballot reportedly *(not officially disclosed)* include the combination of codes for Province, District, City/Municipality, Voting Center, and Clustered Precinct and serial number. The combination of codes and serial number ensured uniqueness of the ballot down to a specific clustered precinct and corresponding to the ballot configuration stored in the compact flash card intended for that clustered precinct.

UV Mark Sensor Disabled

Prior to the printing of the ballots, the COMELEC decided to have the ultraviolet mark detection feature in the PCOS. In a meeting on March 24, 2010 with political parties and interested groups, Chairman Jose Melo explained that the high speed printing process causes the ultraviolet security mark (UV mark) printing to be misaligned by as much as a centimeter away from the intended position of the UV mark. On election day, the PCOS may fail to detect the UV mark, causing the PCOS to reject ballot. It was further explained that the National Printing Office (NPO) wanted its own security mark printed on the ballot so that in the event of an electoral protest and it is called upon to testify, it can confirm or deny that ballots in question were printed by the NPO. Additionally, Mr. Heider Garcia of Smartmatic commented that there cannot be two security marks on the ballot.

The Reasons

The following are testimonies gathered in the hearing conducted by the House of Representatives Committee on Suffrage and Electoral Reforms[4]:

Jose Tolentino, executive director of the COMELEC, testified that the printing of the ballots was so fast that the printing of the ultraviolet mark became inconsistent (as to the density of the ultraviolet ink) causing the PCOS machine to reject some ballots.

Mr. Cesar Flores also testified that there were printing delays because they had to wait for the resolution of cases involving qualification/disqualification of candidates.

Mr. Flores further testified that the delays in the printing schedule led to the decision to speed up the printing resulting in inconsistent ultraviolet ink density used to print the ultraviolet security mark. This was echoed by Dir. Tolentino.

Ms. Grace Enriquez of the National Printing Office (NPO) testified that as soon as the negotiations for the printing of the ballots started, the NPO had expressed the need to print the NPO security on the ballot in order to authenticate ballots which are the subject of an electoral protest.

Ms. Enriquez further testified that the ultraviolet ink density remained consistent up to the last ballot printed.

Dir. Tolentino admitted that the discussion on the printing of NPO security mark was held on February 7, 2010.

Dir. Tolentino also clarified that the printing of the NPO security mark on the ballot started after the completion of the ballots for the ARMM which only had the originally specified ultraviolet security marks.

Another cause of delay in the printing of ballots which was made public via print and broadcast media is the change in the ballot design. In the original design, the names of the candidates per position were listed vertically. In the amended design, the names of the candidates were listed horizontally.

The Alternative

The COMELEC purchased more than 76,000 units of handheld ultraviolet mark scanners which did not go through regular bidding for lack of material time.

Management, Procedural, and Technical Issues

It is quite evident that project management skills, or the lack of it, is at the very core of the decision to disable the ultraviolet security mark sensing feature of the PCOS.

The COMELEC timetable is so tight that it did not leave enough room for reasonable adjustments.

The NPO appeared not to have been consulted on the printing of the ballots at the onset so that the NPO security mark could have been included in the ballot design.

There was lack of due diligence in studying the printing requirements: (i) the inclusion of the NPO security mark, (ii) the impact of printing at high speed, and (iii) the impact of ballot design change, among others.

The explanation offered by Mr. Garcia is implausible. The ballot is large enough and has two faces. The Smartmatic UV security mark and the NPO security mark can be printed separately with enough distance between them. The PCOS software could have simply been designed or customized to ignore the NPO security mark.

The testimony of Ms. Enriquez of the NPO that the ultraviolet ink density printed on the ballot remained consistent up to the last ballot printed contradicted the testimony of Mr. Flores that the high speed printing caused the ultraviolet ink density to be inconsistent. Would this then have implied the unreliability of the ultraviolet security mark sensing feature of the PCOS and, thus, it had to be disabled?

Chairman Melo's explanation had put to doubt the accuracy of the ballot printing. If the UV mark printing can be misaligned, so can the printing of the ovals be misaligned. If a voter shades a misaligned oval then the PCOS will fail to recognize the mark and the vote will not be counted.

The COMELEC did not amend or update Resolution No. 8786 or the General Instructions to the Board of Election Inspectors (BEI) to include instructions on the use of the handheld ultraviolet mark scanners. Thus, the BEIs are not mandated to scan the ballots for ultraviolet marks prior to issuance to the voters. Field reports gathered on election day and the days that immediately followed indicate failure to use the handheld

ultraviolet mark scanners. In the post-election survey conducted by the Social Weather Stations, it was found that only 50% of the handheld ultraviolet mark scanners.

The 1.7 million ARMM ballots did not have the NPO security mark. In the event that the ARMM ballots are the subject of an electoral protest, the same cannot be verified as having been printed by the NPO.

In terms of security, there was one less security feature on the official ballot.

In terms of accuracy of the system, the change in ballot design may have caused the PCOS machine to miss some marks on the ballot or erroneously credit votes meant for one candidate to the favor of another.

In terms of transparency, there was lack of disclosure on the preparations and changing schedules in the printing of the ballots. The memo on the "red alert" status was leaked to media. This led to the decision to acquire another printer to add to the printing capacity.

Conclusion

COMELEC's lack of project management skills and required technical knowledge (even at minimum so as to understand the intricacies of printing) is very evident in its handling of the printing of the ballots and ensuring that the requaired security feature is present. There was no need to disable the ultraviolet security mark sensing in the PCOS.

For disabling the ultraviolet security mark sensing in the PCOS, at least PhP30million of taxpayers' money had to be spent on the handheld ultraviolet scanners. The amount had gone to waste since, as reported by the SWS, only 50% was used. There are also reports that not all handheld ultraviolet scnners had been recovered.

The explanation of Mr. Heider Garcia and the conflicting testimonies of Mr. Cesar Flores and Ms. Grace Enriquez only exposed Smartmatic's lack of expertise in ballot printing and perhaps the lack of expertise on ultraviolet sensing features of the PCOS. Ms. Enriquez represented the NPO, experts in their craft. *EU-CenPEG Project 3030*

End Notes

1   Republic Act No. 9369, "AN ACT AUTHORIZING THE COMMISSION ON ELECTIONS TO USE AN AUTOMATED ELECTION SYSTEM IN THE MAY 11, 1998 NATIONAL OR LOCAL ELECTIONS AND IN SUBSEQUENT NATIONAL AND LOCAL ELECTORAL EXERCISES, TO ENCOURAGE TRANSPARENCY, CREDIBILITY, FAIRNESS AND ACCURACY OF ELECTIONS, AMENDING FOR THE PURPOSE BATAS PAMPANSA BLG. 881, AS AMEMDED, REPUBLIC ACT NO. 7166 AND OTHER RELATED ELECTIONS LAWS, PROVIDING FUNDS THEREFOR AND FOR OTHER PURPOSES"

2   See Section 13 of RA9369 which amended Section 11 of RA8436 into Section 15 – Official Ballot

3   REQUEST FOR PROPOSAL for Solutions, Terms & Conditions for the Automation of the May 10, 2010 Synchronized National and Local Elections, Component 1-B Precinct-Count Optical Scan (PCOS) Items 15 and 17

4   See Transcript of Stenographic Notes, House of Representatives Committee on Suffrage and Electoral Reforms, June 3, 2010