

Buying or Leasing of Election Machines by COMELEC

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Executive Summary

Despite the noticeable improvement, and several declarations of the success of the country's first automated elections, a number of studies (DLSU, CenPeg) and anecdotal pieces of evidence from news reports were able to document some lapses and areas for improvement. This research paper aims to consolidate and identify these areas to help assess the viability of using the same system in the succeeding national elections, the next one being in 2013.

The contract between COMELEC and SMARTMATIC-TIM has allowed for the option to purchase the set of goods (listed as Annex L in the contract) amounting to about 2.1 Billion Pesos. This research paper also aims to evaluate whether it's better for COMELEC to just lease the equipment for future elections or purchase them as stated in one of the contract options.

As this report will serve as one of the inputs in the evaluation of the election process, it will look at the automated election experiences of different countries and compare the Philippine case to these other cases. Using the appropriate methodology, this report will also attempt to provide an economic basis for the choice between purchasing the PCOS machines or just leasing them from SMARTMATIC-TIM. It should be emphasized that economic analysis will be limited to the choice between purchasing and leasing of the election counting machines. It will not cover the entirety of the election process.

The objectives of this study are (1) to review the international experience in the automation of elections and the costs incurred and compare the Philippine experience to these other international cases; (2) to analyze the feasibility of buying versus leasing election counting machines based on the 2010 elections and other recent automated elections (3) To review the procurement and management of the leasing of election counting machine is being practices by COMELEC and recommend improvements needed.

Before the discussion on the different experiences of other countries/states in terms of the implementation of an automated election system, a brief discussion on the general characteristics of each election system is provided. The use of lever voting machines has been one of the oldest automated election systems. One of the benefits of the lever system is that it can prevent the voter from making multiple votes or more choices than permitted. This system has a mechanism of interlocking switches that would prevent a switch from being flipped for a given position once the number of votes for that position has been cast. In the Presidential elections of 2000 in the United States of America, there were several experiences in a number of states that have resulted in the call for changing the system. Some of the issues that were raised about the lever machines include: (1) Lack of paper trail (individual record of each voter's vote) to allow transparency; (2)

Because of the age of some of the machines, they breakdown resulting to long lines during elections; (3) Inadequate maintenance has resulted in a significant number of votes not being counted because of the jamming of the counter wheels.

The punch card system employs a punch card and a small clipboard-sized device for recording votes. Voting would entail removing the chad and punching a hole in the location opposite the candidates' name. A hole beside the name of the candidate indicates a vote for that candidate. One of the major limitations of this system is that it does not warn the voters of possible mistakes such as over-voting (i.e. voting for more than the allowable number of candidates given a certain position). Another limitation is that certain votes may not be accurately counted by the system because of incomplete punches. Incomplete punches are caused by voter error (lack of awareness of how to vote) or malfunctioning of equipment (broken punching stylus). An additional limitation of the system is that the punch card itself does not contain the candidates' names. This may result to some confusion and difficulty for people who are not used to this kind of voting system.

The optical scan technology makes use of a paper ballot (thus, it is often referred to as a paper-based system) on which the voter would indicate their vote by filling the indicated space beside the candidate or connecting the ends of an arrow. After voting, the ballot is inserted into an optical scanner which tabulates the marks on the ballots. The recent technology programmed in optical scanners allows for the insertion of the ballots in any orientation and the scanning of both sides of the ballot.

Another voting machine popular in the US is the Direct Recording Electronic (DRE) Voting Machine. The voter casts his/her vote on these computerized machines by pushing a button or touching an area of a screen where the options/candidates for the positions are presented much like making a choice on an ATM machine. The voter's choices are then recorded electronically (i.e. there is no paper ballot that records the choices of the voter.)

Recently, a number of countries in European Union (Estonia, Netherlands) have attempted to conduct an election where voters can cast their votes via the internet. This is an example of Electronic Distance or Remote Voting System. In this type of technology, the casting of the vote is not done in polling stations but in designated public or private sites like homes, schools or even shopping malls. It may be considered the most convenient type of voting technology since it allows users to cast their vote using a generic form of technology.

The following paragraphs look at the automated election systems used by different states in the US and other countries. An evaluation of the cost of elections in Maryland has shown that adopting the DRE voting technology has resulted to about 10 times higher spending on elections from 1997 to 2008. For Virginia, two general types of election equipment are being used: the Direct Recording Electronic (DRE) and Optical Scanning Equipment. Two types of DREs are used in Virginia, Full-ballot screen and small touch screen.

Although approved for other counties in California, Los Angeles County has identified the following limitations of the optical scan machines resulting to its non-adoption. One of the considerations for the non-adoption of the system is the fact that it is primarily used by small and mid-sized counties (under 500,000 registered voters). Another consideration was the high cost of the hardware and software purchase which would be approximately 40 million US dollars. Optical scan ballots are also more expensive than punch card ballots (about 10 times more expensive). New York was one of the last states to replace their lever voting machines. Current state law requires that all lever voting machines be replaced with precinct-based optical scanners with each scanner amounting to about 7744 USD.

Florida's experience somehow brings to light the difficulty of purchasing election equipment. Sometime between 2004 to 2006, about 15 counties became the first to spend 90 million US dollars to purchase Direct Recording Electronic Voting machines (touch screen machines) but later these same countries decided to throw out the system because of the lack of paper trails. In 2007, more resources were spent in equipment as 23 million dollars were spent on acquiring optical scanners that are capable of producing paper trails.

Before the implementation of the Help America Vote Act, most of the counties in Ohio used punch card voting systems. The secretary of state worked with each county's board of elections (BOE) to purchase an approved system — either a direct recording electronic (DRE) or an optical scan system manufactured by Diebold (now Premier Elections Solutions), Hart InterCivic, or Election Systems and Software (ES&S) – that best-suited each particular county.

During the 2004 elections in Nebraska, the Lancaster County used Optical Scanners. The county experienced the Optical scanners double counting the ballots despite testing the machines prior to the elections and the results of the tests showed that the machines were functioning properly. Similar to the experience of Nebraska, the Bernalillo County New Mexico had some precincts reporting more votes for president than the total number of ballots in the precinct. For instance, Precinct 558 reported 178 early voting ballots and a total of 319 votes for president; indicating a total of 141 phantom votes.

In selected countries in the European Union, there has been a trend in the use of internet voting and casting votes outside of the usual polling precincts. The cases of Estonia and Netherlands provide examples where internet voting was successfully implemented.

This section presents the Philippine experience on the conduct of the automation of elections by first describing the flow of events that led to the adoption of the Automated Election System. Sometime in March 2009, the COMELEC released the Terms of reference for the nationwide automation of the May 2010 national and local elections. The terms of reference actually requests for proposals on three components of automation of elections. The COMELEC also requested those interested to submit a continuity plan and a back-up plan just in case there is a major systems failure. The procedure for the submission of bids is done using the two-envelope

system where each bidder submits two envelopes: the eligibility to bid envelope and the bid envelope. The bid envelope should contain the technical proposal and the financial proposal. The COMELEC Special bids and Awards committee (SBAC) was in charge of the procurement of the goods and services for automation project. The budget allocated to them by Congress through RA9525 is about PhP 11.3 billion.

The Smartmatic-TIM bid for the undertaking of the whole automation project amounted to just about PhP 7.2 billion. This includes the delivery of 82,200 PCOS machines which is priced at about PhP 3.3 billion.

The SBAC evaluated all 7 bids and concluded that only three were eligible. Through SBAC Resoluton No. 09-001, s-2009, the committee declared that only the bid of the Smartmatic-TIM passed the standards of the SBAC and thus was proclaimed as the single complying calculated bid. Despite being the only complying bid, Smartmatic-TIM still had to undergo post-qualification screening and end-to-end testing of the PCOS machines. The SBAC Technical Working Group undertook the end-to-end testing of the PCOS machines from May 27-30, 2009. The team declared that the PCOS project machines passed all the criteria specified in the RFP. The COMELEC Advisory Council (CAC) has indicated that the COMELEC SBAC has satisfactorily conducted the bidding process. While the entire SBAC procedure seems to be satisfactory, there have been a number of criticisms regarding the conduct of the certification testing by SysTest Labs and the Technical Working Group.

The following findings have been observed: (1) There is an indication that the COMELEC has used the best available technology (in terms of usability and cost) for the 2010 elections relative to DRE, Levers or Punch Cards. (2) Relative to other attempts in the country to conduct automated elections, data shows that while the cost per voter during the 2010 National elections is higher than the 2004 National Elections or the 1996-1998 ARMM pilot test, it is still below the 2008 ARMM elections that has an estimated cost of 86.69 pesos per voter. In terms of cost per machine, the 2010 National elections registered the lowest per unit cost for the PCOS at about 60,000 pesos per machine relative to other attempts in the country to conduct automated elections. The fact that the technology that was used is paper-based increases the usability of the technology. Analysis of different types of technology has also shown that paper ballots have good usability.

There are some issues that need to be resolved with the use of the PCOS machines. One of these issues is the disenfranchisement of voters attributable to the refusal of a second ballot to voters who commit errors (especially for overvoting). The review of international experience revealed that there are optical scan machines that can identify under or over voting and can alert the voters to this error. This would then allow voters to correct their errors. However, the experience for the Philippines would not allow this because while the machines would be able to detect errors, the voters cannot correct their mistake for over-voting.

Assessments of the election automation in the country observed that there were lapses in a number of areas. Studies by Cenpeg and the analysis of Monsod observed that the pilot-testing was not satisfactorily conducted.

In terms of buying or leasing equipment, the latter is a more viable option given several factors. First, the shifting of technology is faster and the possibility of these machines to be outdated or obsolete is greater. Leasing the machines will pass the burden of obsolescence to the leasing company. Second, it reduces the risk of the country having to own electoral machines that do not work as anticipated or expected. An example of this can be seen in the case of Florida, where the state purchased the DREV system, only to be unused and thrown away after.

Finally, calculations using data from the 2010 elections show that leasing voting technology for 4 lease payments or less makes leasing more economical than outright purchase of the equipment.