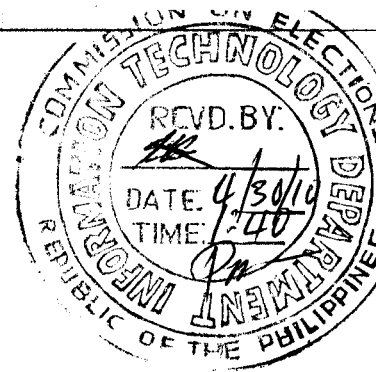


ITD



Republic of the Philippines
COMMISSION ON ELECTIONS
Manila

CONTINGENCY PROCEDURES TO BE ADOPTED AS SUPPLEMENT TO THE GENERAL INSTRUCTIONS TO THE BOARD OF ELECTION INSPECTORS (BEI) AND BOARD OF CANVASSERS (BOC) ON THE VOTING, COUNTING, TRANSMISSION OF RESULTS, AND IN THE CANVASSING/CONSOLIDATION OF ELECTION RESULTS IN CONNECTION WITH THE MAY 10, 2010 NATIONAL AND LOCAL ELECTIONS.

X-----X

MELO, Jose A.R.,
SARMIENTO, Rene V.,
FERRER, Nicodemo
TAGLE, Lucenito N.,
VELASCO, Armando C.,
YUSOPH, Elias R.,
LARRAZABAL, Gregorio V.

Chairman
Commissioner
Commissioner
Commissioner
Commissioner
Commissioner

Promulgated: April 30, 2010

RESOLUTION NO. 8839

Y. Velasco

WHEREAS, by virtue of Republic Act No. 9369, the Commission on Elections has resolved to adopt a paper-based automated election system (AES) in connection with the May 10, 2010 National and Local Elections, by using **Precinct Count Optical Scan (PCOS) Machines** in the voting, counting and transmission of election results from the precinct level, and the **Consolidation Canvassing System (CCS)** in the canvassing/consolidation of the electronically transmitted election results from the precinct/city/municipal/district/provincial board of canvassers;

WHEREAS, considering that the use of the AES presents possible new challenges and distinct scenarios due to its innovation and the highly technical procedure and complexity of the operation of the PCOS machines and the CCS, there is a need to provide for the continuity plan/contingency measures to ensure the continuous operation of the PCOS machines and the CCS before, during, and after election day, and during the canvassing of election results of the City/Municipal/District/Provincial and the National Board of Canvassers;

Mr. Yusop's book to

af

*copy
4/30/2010
3:20pm*

WHEREAS, Item No. 10 of Section 2 of Republic Act No. 9369 defines "Continuity Plan" as "a list of contingency measures, and the policies for activation of such, that are put in place to ensure continuous operation of the AES;"

WHEREAS, in connection with the forthcoming elections, the Commission promulgated the following Resolutions:

- a. On 04 March 2010, Resolution No. 8786, providing for the Revised General Instructions for the Board of Election Inspectors (BEI) on the Voting, Counting, and Transmission of Results
- b. On 30 March 2010, Resolution No. 8809, setting forth the General Instructions Governing the Consolidation/Canvass, and Transmission of Votes at the Municipal/City/Provincial and District Board of Canvassers (BOC);
- c. On 24 February 2010, Resolution No. 8785, providing for the Rules and Procedures for the Testing and Sealing of the PCOS machines before election day;
- d. On 16 March 2010, Resolution No. 8800, which adopted the Recommendations of the Technical Evaluation Committee (TEC) relative to the Validation and Verification Procedure, Revised Continuity Plan and Compensating Controls;

NOW THEREFORE, pursuant to the powers vested in it by the Constitution, the Omnibus Election Code, Republic Act No. 9369, and other election laws, the Commission **HEREBY RESOLVES** to promulgate, the following ***Contingency Procedures to be adopted as supplement to the General Instructions for the Board of Election Inspectors (BEI) on the Voting, Counting, and Transmission of Results, and in the Canvassing of Election Results by the Board of Canvassers (BOC), in connection with the May 10, 2010 National and Local Elections*** :

SECTION 1. Definition of Terms. –

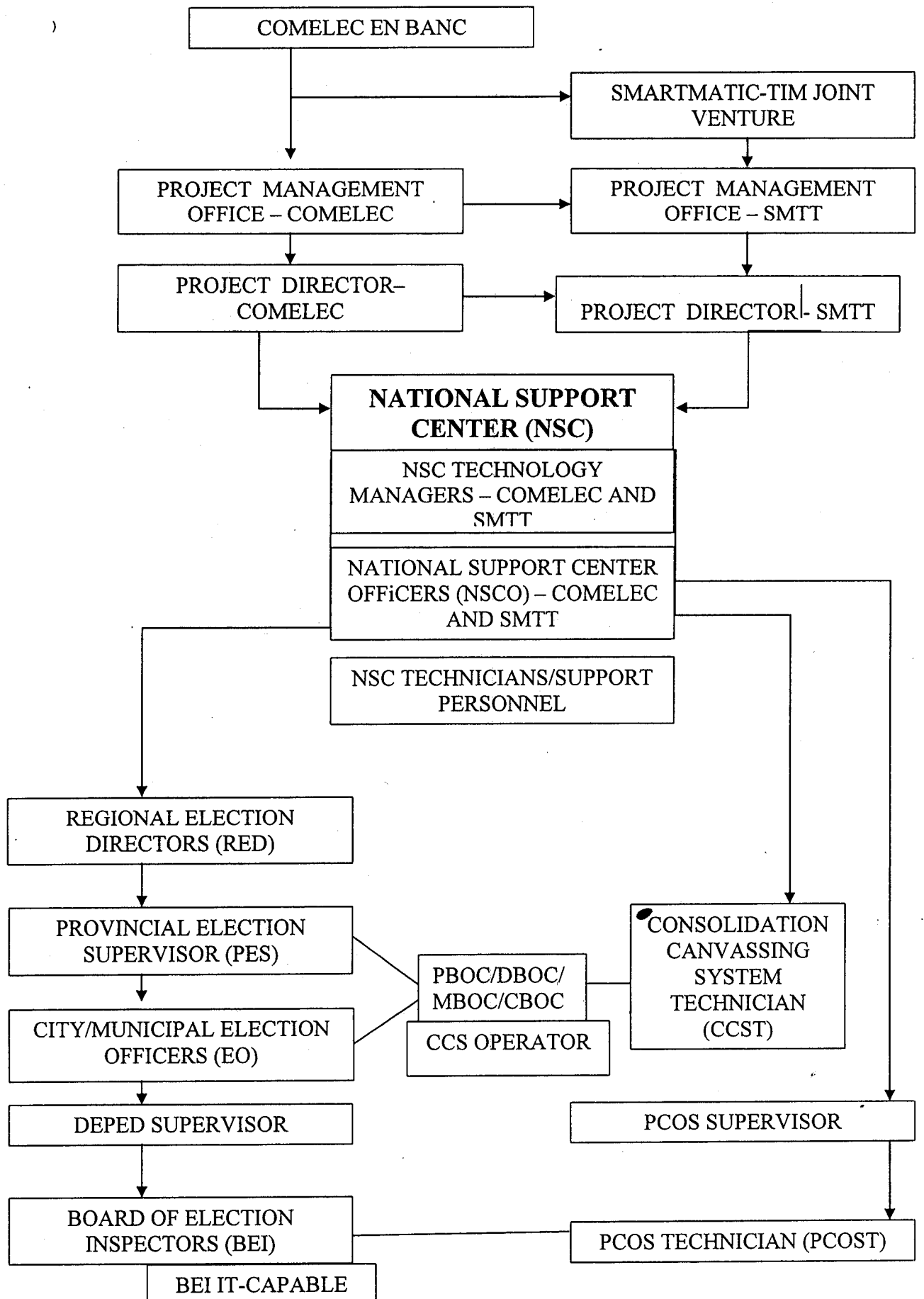
1. COMELEC – Commission on Elections;
 2. SMTT – Smartmatic-Tim Joint Venture;
 3. NSC – The National Support Center, where all contingencies nationwide are reported, addressed and resolved, manned by the Technology Managers from COMELEC and SMTT, the National Support Center Officers, and the National Support Center Technicians and Coordinators;
- 14

4. NSCO – National Support Center Officer, responsible for coordinating with the various CCS Technicians assigned to the canvassing boards nationwide, and the PCOS Supervisors assigned to clustered precincts, and shall address and resolve all possible contingencies;
5. CCS – Consolidation Canvassing System, also known as the Rest-Time Election Information System (REIS), comprising the system and service to be used by the National Board of Canvassers (NBOC), Provincial Board of Canvassers (PBOC), District Board of Canvassers (DBOC), City Board of Canvassers (CBOC) and the Municipal Board of Canvassers (MBOC);
6. CCST – CCS Technician, assigned to every board of canvassers nationwide, and shall coordinate with the NSCO to address possible contingencies as may be reported and authorized by the board to which he/she is assigned;
7. PCOS – Precinct Count Optical Scan;
8. PCOS Supervisor – Officer assigned to monitor a number of clustered precincts and shall report to the NSCO from time to time, and coordinate with PCOS Technicians on problems or issues that need to be resolved at the precinct level;
9. DepEd Supervisor – officer from the Department of Education appointed to supervise a polling center. He/she shall directly supervise and monitor the Board of Election Inspectors (BEIs) and the PCOS machines, make regular reports to the Election Officer of the status and possible problems or issues that need to be resolved at the precinct level;
10. PCOST – PCOS Technician. There shall be at least one (1) PCOST for every polling center, who shall be responsible to address and monitor all activities of the PCOS machines therein. He/She shall also be responsible to report to the PCOS Supervisor on possible contingencies that may arise before, during and after voting.

SEC. 2 – Organizational Structure of the National Support Center. – For the purpose of implementing this Contingency Plan, the following Organizational Structure is hereby adopted:



CONTINGENCY PLAN : ORGANIZATIONAL CHART



Handwritten mark

SEC. 3. Contingency procedures applicable to the National/Central Canvass Service. – The procedures to be observed in the event the following contingencies arise during the conduct of the elections on May 10, 2010 in the National/Central Canvass Service, are as follows:

A. The Data Storage is not available and there is Database Service Interruption:

- i. The National Center Technicians shall notify the Technology Managers of the System failure, and ask for an authorization from the Comelec;
- ii. The Comelec Technology Manager shall authorize and supervise the execution of the recovery procedures;
- iii. The Security Specialist Technician shall block Firewall access to the server from the external network;
- iv. The Database Specialist Technician shall shut down the database service in the primary node. He then checks the integrity and status of the database back-up in the standby server;
- v. If the back-up data files are corrupted or the status is incorrect, the Database Specialist Technician shall check for the contingency procedures for the back-up center;
- vi. If the back-up data files are correct, the Database Specialist Technician shall restore the database with the back-up files, and shall start the database service in the secondary node, and then execute the scripts for primary database transition;
- vii. The Database Specialist Technician shall check the log system messages in the database server and application servers;
- viii. The Database Specialist Technician shall notify the Technology Managers that the system has been recovered;
- ix. The SMTT Technology Manager shall notify the Comelec and ask for authorization for firewall activation, and thereafter, declare the end of the Recovery process;
- x. The Security Specialist Technician shall open the firewall access to the server from the external network.

B. There is Server Hardware Failure and Database Service Interruption.

Handwritten mark

- i. The National Center Technicians shall notify the Technology Managers of the system failure and asks for authorization;
- ii. The Comelec Technology Manager shall authorize and supervise the execution of the recovery procedures;
- iii. The Security Specialist Technician shall block the firewall access to the server from the external network;
- iv. The Database Specialist Technician shall shut down the database service in the primary node and check the integrity and status of the database files in the storage;
- v. If the storage files are corrupted or the status is incorrect, the Database Specialist Technician shall check for the contingency procedures for the Back-up Center;
- vi. If the storage data files are correct, the Database Specialist Technician shall mount the storage device, and start the database service in the secondary node, and execute the scripts for the primary database transition;
- vii. The Database Specialist Technician shall check the log system messages in the database server and application servers;
- viii. The Database Specialist Technician shall notify the Technology Managers that the system has been recovered;
- ix. The SMTT Technology Manager shall notify the Comelec and ask for authorization to activate the firewall, and thereafter, declare the end of the recovery process;
- x. The Security Specialist Technician shall open the firewall access to the server from the external network.

C. There is Server Hardware Failure and Real-Time Election Information System (REIS) Listener Service Interruption:

- i. The National Center Technicians shall notify the Comelec and Smartmatic-TIM (SMTT) Managers of the System failure, and ask for authorization;
- ii. The Comelec and SMTT Technology Managers shall authorize and supervise the execution of the recovery procedures;

CH

- iii. The Security Specialist Technician shall block the firewall access to the server from the external network;
- iv. The Database Specialist Technician shall shut down the Primary REIS Server in the primary node;
- v. The Database Specialist Technician shall shut down the Primary REIS Listener Server in the first node and check the status of the secondary server;
- vi. If the secondary server failed, the Database Specialist Technician shall check for the contingency procedures for the Back-Up Center;
- vii. If the secondary server is working properly, the Database Specialist Technician shall check the application status in the secondary node, and execute the scripts for primary REIS listener transition and check the log system messages in the REIS listener server;
- viii. The Database Specialist Technician shall notify the Technology Managers that the system has been recovered;
- ix. SMTT Technology Manager shall authorize the firewall activation, and thereafter, declare the end of the Recovery process;
- x. The Security Specialist Technician shall open the firewall access to the server from the external network;

D. There is Server Hardware Failure and REIS Service Interruption:

- i. The National Center Technicians shall notify the Technology Managers of the System failure, and ask for authorization;
- ii. The Comelec Technology Manager shall authorize and supervise the execution of the recovery procedures;
- iii. The Security Specialist Technician shall block the firewall access to the server from the external network;
- iv. The Database Specialist Technician shall shut down the Primary REIS Server in the primary node;
- v. The Database Specialist Technician shall check the status of the secondary server;

- vi. If the secondary server failed, the Database Specialist Technician shall check for the contingency procedures for the Back-Up Center;
- vii. If the secondary server is working properly, the Database Specialist Technician shall check the application status in the secondary node, and execute the scripts for primary REIS transition and check log system messages in the REIS server;
- viii. The Database Specialist Technician shall notify the Technology Managers that the system has been recovered;
- ix. SMTT Technology Manager shall notify the Comelec and ask for authorization for firewall activation, and thereafter, declare the end of the Recovery process;
- x. The Security Specialist Technician shall open the firewall access to the server from the external network.

E. There is Power Supply Interruption (Blackout) and the National Service is Interrupted:

- i. The Electricity Technicians shall notify the Comelec and SMTT Technology Managers of the Power Supply failure, and ask for authorization;
- ii. The Comelec Technology Manager shall authorize and supervise the execution of the recovery procedures;
- iii. The Electricity Technician shall power on the generator set and check the status of the generator set;
- iv. The Electricity Technician shall change the power connection for the external source to the generator set and check the status of the UPS System;
- v. The Electricity Technician shall continually check the status of the external electricity source and when it is up/on for at least thirty (30) minutes, and the UPS system is charged, he must change back the power connection to the external source;
- vi. The SMTT Technology Manager shall declare the end of the Recovery process.

af

F. There is Power Supply Interruption (Blackout) and the Central Service is Interrupted:

- i.** The Electricity Technicians shall notify the Technology Managers of the Power Supply failure, and ask for authorization;
- ii.** The Technology Managers shall ask the Comelec Project Director for authorization;
- iii.** The Comelec Project Director shall give the authorization for the Recovery Plan;
- iv.** The Central Center Technicians shall check the status of REIS listener queues and latest transactions;
- v.** The Back-Up Center Technician shall check the status of the servers:
 - Check Status of the Database, based on the latest transaction from the Regional Center.
 - Check application servers' status (Applications and System logs).
 - Check network connection status: network reachability with the routers and firewall in the Region.
- vi.** If the status of the systems is correct, then the Back-Up Center Technician shall:
 - Change the database mode from Stand-by to Primary and check database services.
 - Start-up REIS and REIS listener services, and check application log messages.
 - Ask for authorization from the COMELEC Technology Manager.
- vii.** The Comelec Technology Manager shall authorize and supervise the activation of the back-up Center Firewall;
- viii.** The Back-Up Center Technician shall open the Back-Up Center Firewall, allowing the incoming transmissions and check for incoming transmissions in the REIS listener logs;
- ix.** The Technology Managers shall finalize the recovery procedures.

apt

G. There is Network Access Failure and National Service is interrupted.

- i. The National Center Technicians shall notify the Technology Managers of the network failure, and ask for authorization;
- ii. The Comelec Technology Manager shall authorize and supervise the execution of the recovery procedures;
- iii. The National Network Specialist shall check the connections with the back-up provider, the network access with all the locations and check the interfaces status;
- iv. The National Network Specialist shall disable the connection with the Primary Network provider, and activate the back-up network provider;
- v. The National Network Specialist shall check for incoming connection from the different locations, then call the primary network provider support center, and together, check the status of the Network;
- vi. When the primary network provider is ready, the National Network Specialist shall ask for authorization;
- vii. The Comelec Technology Manager shall give the authorization for the change;
- viii. The Regional Network Specialist shall disable the connection with the back-up network provider, and activate the primary network provider;
- ix. The Technology Managers shall finalize the recovery procedures.

H. Critical Weather/High Temperature Conditions and there is National Service Interruption:

- i. The Electricity Technicians shall notify the Technology Managers of the air-conditioning failure, and ask for authorization;
- ii. The Comelec Technology Manager shall give authorization for the execution of the recovery procedures;
- iii. The Comelec Technicians shall shut down all servers in the Data center, except for the AES servers;

- iv. The Electricity Technician shall start the FAN systems in the Data center, and watch the temperature level;
- v. Once the air-conditioning system has been recovered, the recovery process ends.

I. Fire, Flooding and Earthquake Occur and there is Central Service Interruption:

- i. The Central Technical Personnel must leave the building and if possible move to the back-up Center;
- ii. The Technology Managers shall ask from Comelec Project Director for the authorization to use the recovery plan;
- iii. After authorization is given by the Project Director, the Central Center Technicians must check the status of the REIS listener queues and latest transactions;
- iv. The Back up center technician must check the status of the servers:
 - Check status of the database, based on the latest transaction from the central center.
 - Check application servers' status (applications and system logs).
 - Check network connection status: network reachability with the routers and firewall in the Region.
- v. If the status of the system is correct, then the Back Up Center Technician must change the database mode from stand-by to primary and check databases services. He must start-up the REIS and REIS listener services, and check application log messages;
- vi. The Back-Up Center Technician must ask for authorization from the Comelec Technology Manager to activate the back-up center Firewall;
- vii. After authorization is given by the Comelec Technology Manager, the technician must open the back-up center firewall, allowing incoming transmissions, and check for incoming transmissions in the REIS Listener logs;

WJ

- viii. The SMTT Technology Manager shall finalize the Recovery Procedures.

SEC. 4. Contingency procedures applicable to the Provincial/District/City/Municipal Board of Canvassers. – The procedures to be observed in the event the following contingencies arise during the conduct of the elections at the PBOC/DBOC/CBOC/MBOC on May 10, 2010, are as follows:

A. There is Hard Disk Failure and there is DATABASE/REIS/REIS Listener Service Interruption, the System will freeze, and no further operation can be performed on the System, or CCS Graphical Interface is not responding, or does not start, or shows a blank screen indicating an error boot, or does not turn-on:

- i. The PBOC/DBOC/CBOC/MBOC shall inform the CCST of the failure;
- ii. The CCST shall report the failure to the NSCO, indicating the name of the server and the location;
- iii. The NSCO shall, upon authority of the PBOC/DBOC/CBOC/MBOC, ask the CCST to repeat the turn-off and turn-on procedure;
- iv. If the problem persists, the NSCO shall arrange for the delivery of the replacement CCS to the affected PBOC/DBOC/CBOC/MBOC;
- v. The CCST, under the direct supervision of the PBOC/DBOC/CBOC/MBOC, shall:
 - Turn off the defective CCS.
 - Remove the removable memory from the defective CCS.
 - Store the defective CCS in its original packing.
 - Place the replacement CCS in the designated location.
 - When the replacement CCS arrives, the CCST must install the removable memory into the replacement CCS
 - Connect the replacement CCS to the power main and turn it on.
 - Call the NSCO, and update them on the status of the CCS.

B. There is Power Supply Interruption (Brownout/Blackout) and Provincial/District/City/Municipal Canvass Service is interrupted:

- i.** The PBOC/DBOC/CBOC/MBOC, together with the CCST, shall check the status of the generator set, its gasoline level and cable connections;
- ii.** The PBOC/DBOC/CBOC/MBOC shall start the generator set, and check the activity indicator in the generator set;
- iii.** The PBOC/DBOC/CBOC/MBOC shall authorize the CCST to unplug the CCS power cables from the external electricity source, and to plug the cable in the Generator set outlet;
- iv.** The CCST shall call the NSCO informing them of the status of the system;
- v.** The NSCO shall record the new status for the location;
- vi.** The CCST shall continually check the status of the external electricity source;
- vii.** Upon the return of external electricity source lasting more than one hour, the CCST must request authorization from the PBOC/DBOC/CBOC/MBOC to switch over to the external electricity source;
- viii.** The PBOC/DBOC/CBOC/MBOC shall authorize the switch back to external electricity source;
- ix.** The CCST shall unplug the CCS UPS power cable from the generator set and connect it to the external power source;
- x.** PBOC/DBOC/CBOC/MBOC shall authorize the switch back to the external electricity source;
- xi.** The CCST shall unplug the CCS UPS power cable from the generator set and connect it to the external power source;
- xii.** The CCST shall call the NSCO indicating the new status of the location;
- xiii.** NSCO shall record the new status, and thereafter, end the recovery plan for the center.

C. There is Wide Area Network (WAN) Access Failure and the Provincial/District/City/Municipal Canvass Service is Interrupted:

- i.** The PBOC/DBOC/CBOC/MBOC shall inform the CCST of the inability of the CCS to send/receive;
- ii.** The PBOC/DBOC/CBOC/MBOC shall authorize the CCST to:
 - Check the status of the network device;
 - Unplug and plug back the network device, and test the connection;
 - If the CCS still cannot connect, the CCST must use the alternative network devices(s) if available and re-test the connection;
 - The CCST shall call the NSCO indicating the status of the system if the CCS still cannot connect.
- iii.** The NSCO shall record the new status for the location and check the network status with the network providers;
- iv.** The NSCO shall call the network technicians in order to supply back-up network devices if necessary;
- v.** The PBOC/DBOC/CBOC/MBOC shall authorize the Network Technician to plug the back-up network device into the CCS, and test the connection;
- vi.** If the CCS is able to connect to the network, then no further action is needed. If not, the Network Technician, with authorization from the PBOC/DBOC/CBOC/MBOC, must check the network device and network availability with the provider;
- vii.** Once the connection is ready, the Network Technician must call the NSCO indicating the status of the system;
- viii.** If the connection still cannot be established, the Network Technician must inform the PBOC/DBOC/CBOC/MBOC,
- ix.** The PBOC/DBOC/CBOC/MBOC must inform the Commission and request for further instructions;
- x.** The NSCO, if informed by the CCST of the network connection recovery, records the new status for the location.

af

D. There is a catastrophe: fire, flood, earthquake and others, and the Provincial/District/City/Municipal Canvass Service is interrupted:

- i. The PBOC/DBOC/CBOC/MBOC, upon advise of the Canvassing Center Security Personnel, or when the danger is apparent, shall order the evacuation/transfer the provincial/district/city/municipal canvassing center;
- ii. The PBOC/DBOC/CBOC/MBOC shall secure all election materials and equipment;
- iii. The PBOC/DBOC/CBOC/MBOC shall check with the Regional Election Director/ Provincial Election Supervisor for further instructions;
- iv. The CCST shall check all the network devices and servers. If any of the equipment is missing, he shall call the National Support Center and inform NSC about the missing equipment. For the replacement procedure, he shall check the corresponding recovery procedure;
- v. The Regional Election Director/ Provincial Election Supervisor shall issue order on what action to be under taken for the Provincial/District/City/Municipal Canvassing Center

E. There is sabotage, equipment robbery and other similar circumstances, and the Provincial/District/City/Municipal Canvass Service is interrupted:

- i. If the canvassing center is safe, the PBOC/DBOC/CBOC/MBOC shall direct the Provincial/District/City/Municipal personnel to stay in the canvassing center and continue with the proceedings;
- ii. If the Center is not safe, the PBOC/DBOC/CBOC/MBOC shall order a stop to all proceedings, and leave the provincial/district/city/municipal center. The PBOC/DBOC/CBOC/MBOC shall secure all election materials and equipment in their custody;
- iii. The CCST shall check all the network devices and servers. If

any of the equipment is missing, the CCST shall call the NSCO and inform them about the missing equipment. For the replacement procedure, he shall check the corresponding recovery procedure.

SEC. 5. Contingency procedures applicable to the PCOS System. –

The procedures to be observed in the event the following contingencies arise during the conduct of the elections on May 10, 2010 in the precinct level involving the PCOS System, are as follows:

A. The BEI PIN/s is unavailable:

- i. The BEI shall inform the PCOST;
- ii. The PCOST shall inform the PCOS Supervisor;
- iii. The PCOS Supervisor shall inform the NSCO;
- iv. The NSCO shall advise the PCOS Supervisor to provide the PINs to the BEIs;
- v. The PCOST shall provide the PINs to the BEI;
- vi. The PCOS is now ready to resume the voting process;
- vii. The PCOST shall call the PCOS Supervisor, who in turn shall call the NSCO and inform them about the availability of the PINs.

B. There is a Ballot Jam:

- i. If the ballot is visible, the BEI-IT capable shall gently pull out the ballot;
- ii. If the ballot is not visible, the BEI shall call the PCOST who will remove the PCOS from the ballot box, and retrieve the ballot causing the jam;
- iii. The BEI chairman, after the PCOS has been cleared of the ballot jam, shall re-feed the ballot to the PCOS. If the ballot is rejected because it has been already counted, the BEI chairman shall direct the PCOST to remove the PCOS from the ballot box, and shall deposit the said ballot inside the ballot box without passing through the PCOS. However, if the ballot was rejected for other causes (e.g. invalid, ambiguous, misread), the BEI shall follow the provisions as

stated in the Revised General Instructions for BEIs for rejected ballots;

- iv. In cases when the ballot jam is caused by the improper stacking of the ballots inside the ballot box, and there is a need to open the ballot box in order to make room for additional ballots, the chairman of the BEI, in the presence of watchers, shall open the ballot box, press the ballots in order to make room for additional ballots, and thereafter, close the ballot box.

C. There is a Printer Jam:

- i. Under the direct supervision of the BEI, the PCOST shall open printer door and remove the jam by gently pulling the paper back toward the paper roll;
- ii. The PCOST shall reload the paper, once the jam has been removed.

D. There is a Power Supply Interruption (Battery):

- i. The NSCO, upon advise of the PCOS Supervisor or PCOST, must undertake measures to locate and deliver a replacement battery;
- ii. For the Battery Replacement, under the direct supervision of the BEI, the PCOST shall:
 - Disconnect the battery, if available.
 - Connect a new battery
 - Connect the inverter to the external source (if applicable).
 - Turn the PCOS on.

E. The PCOS operation is interrupted during voting, as when the Display Screen is unresponsive, or there is a Hardware failure or damage, and other similar circumstances:

- i. The PCOST shall call the PCOS Supervisor, who shall in turn inform the NSCO;

- ii. The NSCO shall ask the PCOST, under BEI supervision, to turn-off and then turn-on the PCOS, and follow other general troubleshooting instructions;
- iii. If the problem persists, the NSCO shall arrange for delivery of replacement PCOS;
- iv. If the NSCO confirms that a replacement contingency PCOS shall be arriving, the BEI shall:

- Turn-off the defective PCOS;
- Remove the PCOS from the ballot box;
- Open the ballot box, retrieve the ballots, if any, count ballot/s, place them in an envelope, seal, and record in the Minutes;
- Put the sealed envelope containing the counted ballots, if any, in the ballot box, close and lock the ballot box;
- Upon authority of the Election Officer, continue with the voting, depositing the ballots in the ballot box without passing through the PCOS;
- Once the replacement contingency PCOS arrives, the BEI Chairman shall open the ballot box, retrieve the envelope containing the counted ballots, if any;
- Retrieve the uncounted ballots;
- Take out the counted ballots inside the envelope and return them inside the ballot box;
- Place the uncounted ballots inside the envelope and seal it;
- Put the sealed envelope containing the uncounted ballots, if any, in the ballot box;
- Close and lock the ballot box;
- Break the seal of the Poll Worker Memory Card compartment of the defective PCOS;
- Remove the Main Memory Card of the defective PCOS;
- Open the Poll Worker Memory Card Compartment of the replacement PCOS;
- Insert the main memory card taken from the defective PCOS;

- Close the Poll Worker compartment of the replacement PCOS;
- Open the Administrator Memory Card compartment of the defective PCOS;
- Remove the back-up memory card of the defective PCOS;
- Open the Administrator Memory Card compartment of the replacement PCOS;
- Retrieve the back-up memory card installed in the replacement PCOS;
- Insert the back-up memory card taken from the defective PCOS to the replacement PCOS;
- Close the Administrator compartment of the replacement PCOS;
- The Chairman of the BEI shall retrieve the envelope containing the uncounted ballots from the ballot box;
- Install the replacement PCOS on the ballot box;
- Plug the replacement PCOS to the electrical outlet using the power cable;
- Plug the battery to the replacement PCOS;
- The PCOS shall then perform the initialization process;
- The Chairman shall feed the uncounted ballots one at a time into the replacement PCOS;
- Follow the General Instructions up to the end;
- After all the procedures have been followed, reinsert the original back-up memory of the replacement contingency PCOS;
- The PCOST shall call the NSCO, through the PCOS Supervisor, and inform them about the replacement.
- If the voting is over, and there is still no contingency PCOS, as confirmed by the NSCO, the BEI shall use the PCOS of the next or nearby precinct, following the procedure as enumerated in the next item.

- v. If the NSCO confirms that there is an available replacement PCOS, but the time to wait for the replacement is more than the time needed to wait to be able to use the PCOS of the next or nearest precinct;

- The NSCO, through the PCOS Supervisor, shall arrange the transfer of a PCOS from the next/nearby polling precinct to be used as the replacement PCOS;
 - After the said PCOS from the next/nearby precinct has finished all its activities, it shall be retrieved and delivered by the PCOST to the precinct with the defective PCOS;
 - The BEI and the PCOST shall undertake to follow the applicable steps as enumerated in the preceding Item, and follow the General Instructions up to the end;
 - After all the procedures have been followed, reinsert the original back-up memory of the replacement PCOS, and return it to its original polling place/center;
 - The PCOST shall call the NSCO, through the PCOS Supervisor, and inform them about the replacement.
- vi.** If there is no available replacement, as confirmed by the NSCO, or there is no available PCOS from the nearest precinct/polling center, as confirmed by the NSCO, and there are still unscanned ballots:
- The BEI, after following the preceding steps on continuing with the voting with the ballots not passing through the PCOS, shall ask for authority from the Election Officer to transfer the ballot box containing the ballots to the Municipal/City Canvassing Center with the contingency PCOS;
 - Upon closing of the polls and with the corresponding authority from the Election Officer, the BEI shall, together with the watchers, transport the ballot box containing the ballots, and the main memory card of its PCOS to the Municipal/City canvassing center that has the available Contingency PCOS;
 - The BEI members then shall open the ballot box and feed the uncounted ballots, one at a time, in the Contingency PCOS;
 - Close the polls, and follow the General Instructions up to the end.

F. The PCOS was unable to print the Election Returns:

- i.** The PCOST, through the PCOS Supervisor, shall inform the NSCO, who shall instruct the PCOST the general troubleshooting procedures;
- ii.** If the problem persist, the NSCO shall undertake to:
 - Arrange for the delivery of replacement PCOS, if available; or
 - If no replacement PCOS is available, direct the PCOST to inform the BEI to take the removable main memory to the identified nearest precinct/polling center, or to their respective Municipal/City canvassing center, as the case may be;
- iii.** Once the replacement PCOS is available, the PCOST shall perform the following under BEI supervision:
 - Turn off the defective PCOS.
 - Remove both CF cards from the defective PCOS.
 - Store the defective PCOS in its original packing.
 - Install the replacement PCOS
 - Install both CF cards into the replacement PCOS.
 - Ensure that a roll of paper is installed.
 - Connect the replacement PCOS to the battery and external electricity source.
 - Perform PCOS startup procedure.
 - Follow the General Instructions to the end.
 - The PCOST shall call the NSCO, and inform them about the replacement.
- iv.** If the PCOS of a nearby precinct shall be used for the printing of the election results, the PCOST shall, under the supervision of the BEI:
 - The NSCO, through the PCOS Supervisor, shall arrange the transfer of a PCOS from the next/nearby polling precinct to be used as the replacement PCOS;
 - After the said PCOS from the next/nearby precinct has finished all its activities, it shall be retrieved and delivered by the PCOST to the precinct with the defective PCOS;
 - The BEI and the PCOST shall undertake to follow the applicable steps enumerated as when using a replacement PCOS, and follow the General Instructions up to the end;

af

- After all the procedures have been followed, reinsert the original back-up memory of the replacement PCOS, and return it to its original polling place/center;
 - The PCOST shall call the NSCO, through the PCOS Supervisor, and inform them about the replacement.
- vii.** If there is no available replacement PCOS from nearest precinct/polling center, as confirmed by the NSCO:
- The BEI shall, together with the watchers, transport the main memory card of the defective PCOS to the Municipal/City canvassing center that has the available Contingency PCOS;
 - Follow the General Instructions to the end using the Contingency PCOS.
 - The PCOST shall inform the NSCO, through the PCOS Supervisor, of the use of the Contingency PCOS.

G. The Main Memory card, or iButton Keys, is/are defective/lost/stolen destroyed:

- i.** The BEI shall inform the PCOST and the DepEd Supervisor, who shall then inform the Election Officer concerned;
- ii.** The PCOST shall inform the NSCO, and await further instructions;
- iii.** The BEI, after receiving authority from the Election Officer, shall proceed with the voting, depositing the ballots into the ballot box without passing through the PCOS;
- iv.** After voting and closing of the polls and there is still no replacement iButton or Main Memory Card, the Election Officer shall direct the BEI to deliver, together with the watchers present, the ballot box containing the ballots to the Municipal/City Treasurer for safekeeping;
- v.** The Election Officer shall send out the notice of the date, time and place of reconvening of the BEIs for the purpose of the automated counting to all concerned parties.

H. There is a WAN (Wide Area Network) access failure:

- i.** The PCOST, under BEI supervision, shall repeat the turn-off and turn-on procedure and to check the network link indicator;
- ii.** If the problem persists, the PCOST, through the PCOS Supervisor, shall

inform the NSCO, who shall:

- Arrange for the delivery of replacement modem and BGAN device, if available; or
- Direct the PCOST to inform the BEI to take the removable main memory to the identified nearest precinct/polling center, or to their respective Municipal/City canvassing center, as the case may be;

iii. If the replacement modem and BGAN device is available, the PCOST, under the supervision of the BEI, shall:

- Connect replacement modem and BGAN device to PCOS.
- Retransmit the information.

iv. If the PCOS of a nearby precinct shall be used for the transmission of results, the BEI shall, in the presence of watchers:

- After printing the remaining election returns and other reports, turn -off the PCOS;
- Eject the removable main memory from the PCOS, place it inside the envelope for such purpose, and write therein "NOT TRANSMITTED";
- Bring the removable main memory to the identified nearby polling precinct using the PCOS therein to transmit the information;
- Give the removable main memory to the PCOST;
- PCOST shall ensure that the PCOS of the nearby precinct has finished all activities involving the PCOS;
- The PCOST shall remove the main memory and back-up memory of the PCOS from the nearby precinct;
- The PCOST shall plug the main memory of the defective PCOS into the Poll Worker slot of the PCOS of the nearby precinct;
- Transmit the results using the PCOS of the nearby precinct;
- After the results have been successfully transmitted, the BEI shall remove the main memory card, place it in the envelope and write therein "TRANSMITTED";
- The PCOST shall return the original main memory and back-up memory of the replacement PCOS;
- If the results still cannot be transmitted, the PCOST shall inform the NSCO, through the PCOS Supervisor, and await

further instructions.

- v. If there is no alternative transmission available in the polling center or nearby polling center, the BEI shall proceed to their respective MBOC/CBOC. In this case, the BEI shall:
- Complete the printing of the thirty (30) copies of the Election Return (ER), and other reports, and follow the General Instructions to the end;
 - Once all the activities are completed, the BEI shall retrieve the Main Memory Card of the PCOS, place it in a sealed envelope, write therein the words "NOT TRANSMITTED" and, accompanied by the watchers present, deliver the same to the RCG (Reception and Custody Group) of the BOC of the city/municipality concerned, where the consolidation of the untransmitted results shall be done.

I. There is a Catastrophe: Fire, flood, earthquake and the PCOS Service is interrupted:

- i. The BEI, upon advise of the Polling Place Security Personnel, or when danger is apparent, shall instruct all ~~polling center~~ personnel to evacuate the polling center;
- ii. The BEI shall secure all election materials and equipment;
- iii. The BEI shall inform the Election Officer and await further instructions;
- iv. The Election Officer shall instruct the BEI on further action/s to take.

J. There is a sabotage, robbery, other similar circumstances:

- i. If the polling place is safe, the BEI shall direct the polling place personnel to stay in the polling place and continue with the proceedings;
- ii. If the polling center is not safe, the BEI shall order the stop to all proceedings and to leave the polling place;
- iii. The BEI shall secure all election materials and equipment;
- iv. The PCOST shall check all the network devices, the PCOS, and peripherals. If any of the equipment is missing, he shall call the National Support Center, and inform them about the missing equipment, if any, and the reasons therefor. For the replacement procedure, check the corresponding recovery procedure.

SEC. 6. Common Provisions. – In all cases, all contingency measures and procedures undertaken by the BOCs and the BEIs shall be supervised and/or authorized, noted in the Minutes, and in the presence of watchers, if any.

SEC. 7. Testing and Sealing of the PCOS. – The contingency measures herein set forth shall also be adopted, as far as applicable, during the testing and sealing of the PCOS as scheduled before election day.

SEC. 8. Effectivity and Dissemination. – This Resolution shall take effect after its publication in two (2) daily newspapers of general circulation in the Philippines.

The Education and Information Department shall cause the publication of this Resolution and shall furnish copies thereof to all Regional Election Directors, Provincial Election Supervisors, Election Officers and Boards of Election Inspectors nationwide.

SO ORDERED.


JOSE A.R. MELO
Chairman


RENE V. SARMIENTO
Commissioner


NICODEMO T. FERRER
Commissioner


LUCENITO N. TAGLE
Commissioner


ARMANDO C. VELASCO
Commissioner


ELIAS R. YUSOPH
Commissioner


GREGORIO Y. LARRAZABAL
Commissioner