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The Kenya ICT Action Network (KICTANet) Preliminary Observations on Technology Deployment in Kenya's General Election 2017

The Kenya ICT Action Network (KICTANet) is a platform for persons and institutions interested in ICT policy. KICTANet observed the use of ICTs before, during and after Kenya's 2017 General Elections. Aspects observed before elections included the registration process, access to election information by citizens as well as use of online spaces during the electioneering period. The mission particularly observed use of the Kenya Integrated Elections Management Systems (KIEMS) from a user perspective during the elections. Further, aspects of access to information were also observed.

KICTANet's observation mission comprised 22 observers who covered over 100 polling stations randomly selected. In preparation for the observation exercise, KICTANet held discussions on technological emerging issues on the elections. Some team members also attended training meetings organised by the electoral management body the Independent Electoral and Boundaries Commission (IEBC), where they observed mock voting and transmission of results. This preliminary report gives a highlight of observations made pre-and during the election.

PRE-ELECTION OBSERVATIONS

1. Registration of voters

KICTANET observed the biometric registration, and verification of voters. IEBC provided Biometric Voter Registration (BVR) kits to all regions in the country, where unregistered voters were able to register by having their fingerprints scanned, and facial photos taken. IEBC also captured the citizen registration details as they appear on the National identification card, or the passport. They also collected phone numbers, and emails of the voters. The mission observed that some voters who had registered prior to the 2013 elections were missing from the 2016-2017 register, and they had to re-register like fresh voters. During this exercise, IEBC also provided a portal for citizens to verify if they were registered, so that they could avoid double registration, or re-register if they were missing from the register.

2. Access to Information

KICTANet observed access to election information. When the IEBC uploaded the database of voters for inspection by voters, members of KICTANet who accessed the database raised two concerns:

- Security of the system where the database did not have protection to ensure that the database would not be easily harvested; and,
- Privacy and data protection of personal information contained in the IEBC register.

These concerns were forwarded to IEBC who immediately addressed the security concerns through the incorporation of a captcha functionality¹ on its online voter identification portal that ensured there would be no automated harvest of voter data. The data protection concerns could not all be immediately addressed and KICTANet noted that the country needed to have a comprehensive legal framework for data protection. Some of the concerns that were not solved were that the portal was providing more information than is necessary such as showing the date of birth of voters, and full ID number without asking for a challenge question to authenticate the search. Also, that it provided this information to anyone who queried the database with any ID or Passport number.

Further, citizens were able to access their voter information which included the stream number that they would be voting from through sending a short Message (SMS) to the number 70000 as well as through the online voter verification portal.

2. Use of online spaces for electioneering

It was observed that political actors such as parties and candidates made use of social media for campaigning, voter mobilisation and engagement. It was also noted that there was massive negative campaigning, fake news and disinformation online. KICTANet engaged with platform providers such as Facebook who provided education on how to report harmful content online. In addition, in July 2017 during the Kenya Internet Governance Forum (KIGF), the network engaged with the National Cohesion and Integration Commission (NCIC) where participants debated on the challenging issue of hate speech online, and possible interventions.

3. Election policy and legal processes

Representatives of the observation team met with the Chair of IEBC before the elections. They were updated on the status of preparedness by the IEBC on technology deployment. The team got a confirmation that IEBC was against the shutting down of the Internet during the general election if agitations arose, as this would drastically affect transmission of results, and access to information.

It had been hoped that the IEBC would have had a face to face engagement with the broader KICTANet community. However, this did not happen due to time constraints.

In 2016, KICTANet contributed to a national discussion on election laws through a **Memorandum on Election law (Amendment) Bill**² 2016 to the Senate. KICTANet made several recommendations among them the need for IEBC to develop a system that safeguards the integrity of the vote as well as efficiency of transmission.

4. Demise of IEBC ICT Director, Chris Msando

In the course of policy advocacy, KICTANet members interacted with the late Chris Msando who was the ICT Manager-at IEBC during the Kenya Internet Governance Forum (KIGF). The network and the ICT community at large received the news of his demise with shock. Members sent messages of condolences to his family and called upon authorities to investigate his unfortunate death.

¹ Captcha on the online voter verification portal <https://voterstatus.iebc.or.ke>

² Memorandum on Election Laws <https://www.kictanet.or.ke/documents/Elections/>

OBSERVATIONS DURING ELECTIONS

KICTANet's observers checked the use of technology from a user perspective during the elections at various stages, namely: preparations on the day before the election; opening of polling stations; voter identification and assisted voters; vote counting; vote tallying; transmission of results and closing procedures at the polling stations.

1. Preparations on the day before

Observers noted that presiding officers received KIEMS kits, power banks, passwords, an election operations manual, and other election materials on the day before the election at the constituency centers. In some stations, observers witnessed the kits being charged on the night of August 7th.

The Presiding Officer (PO) in charge of a polling station was the custodian of the KIEMS and the password. The passwords for the Polling Center were the same for all devices. In some stations, the Deputy Presiding Officers and Clerks seemed to have more knowledge of the technology and they assisted the Presiding Officer in logging into the system. The PO and Clerks had access to the KIEMS device, and they alternated in using it during the election process.

In some polling stations, IEBC officials were observed holding meetings with their polling clerks, agents, observers and security personnel during which they explained election processes. The teams also set up the polling stations providing areas for voter identification, issuance of ballot papers, voting booths and spaces for ballot boxes. Observers noted that the same tablet was used for biometric voter identification as well as transmission of results.

2. Opening of the polling stations and set up

Most polling stations observed were ready and opened between 6:00 am to 6.30 am. In these stations, there was one KIEMS kit per polling station. One constituency was observed to have 15 extra KIEMS devices which would be used by whichever polling center in the constituency in the eventuality that any of them experienced any problem with the issued devices. There were also power banks and chargers for each of the kits. Further, some polling stations had two technicians on standby, but they were meant to server an entire constituency if a technical issue arose.

Polling stations were opened through the KIEMS kit where the Presiding Officer logged in, scanned the Quick Response Code (QR code)³ on the voter register for the station and awaited for the system to load. In some stations, Presiding Officers delayed in starting the system(s) as they retrieved passwords from their wallets and bags. Further, some of the POs were not aware of the procedure for activating the KIEMS devices for election day (scanning the QR Codes on the manual registers), as on booting the devices were showing poll numbers used for training. In such cases the Presiding Officers consulted with fellow Presiding Officers and Deputy Presiding Officers. Others called a hotline provided by the IEBC for assistance. In a few cases, the kits took a while to access the network. However, all stations observed had commenced voting by 6.30 am.

KICTANet observers confirmed that the devices had no tally when they were switched on, and started the logging with the identification of the first voter. The KIEMS device is a dual-SIM GSM based and thus uses the services of either of the three different service providers namely Airtel, Safaricom and Telkom depending on the locality of the polling station and the strength of the network. In some polling stations, the devices accessed more than one network.

³ Quick Response Code is a unique matrix barcode to identify objects

All polling centres had voter registers indicating the polling station for voters. However, it was observed that most of the registers on the notice-boards were published in very small fonts many complained they could not read. In some stations, voters were recommending to others to obtain their registration and polling station data from the SMS service 70000. Several polling centres that had clerks helping the voters identify their queues and others did not have. In some centres, clerks guided voters on the queues, assisted voters who could not find their Polling stations by sending their ID numbers to the 70000 SMS service or using the online web portal.

2. Voter identification and assisted voters

Voters were identified through biometrics on the KIEMS kit. The polling clerk with the KIEMS device placed the voter's finger on the biometric reader for scanning. Some voters had to place several fingers before the scanner could read the fingerprint. Voters whose fingerprints could not be read were searched in the system using their ID or passport numbers. Where the system noted that the voters biometric details were available, the voter was asked to wipe their fingers, the scanner was wiped, and fingerprint scanning was attempted again. If scanning failed again, the polling clerk alerted the Presiding Officer to authorize a different means of identification.

KICTANet Observers witnessed a small number of people who were identified only through search of their ID numbers or passport numbers in the KIEMS system (IEBC clerks termed this as alphanumeric search). Most of these were old people and manual workers who couldn't be identified through the scanning of their fingers. Alphanumeric search had to be authenticated by the presiding officer with a password entry on the KIEMS device, and thereafter the voter's information recorded on form 32A,⁴ after which the voter was allowed to vote.

There were also those who could not be identified as a result of not having proper documentation or none. Others had registered in a different polling station and they were given information on their correct polling station. In one station, observers witnessed a voter whose identification number was captured wrongly.

Observers noted the experience of the voters in the polling station and recorded that in the first hour, voter identification took an average of about 5 minutes with the whole process of identification, obtaining ballot papers, voting, casting the ballot and being marked with indelible ink taking up to 12 minutes. After the clerks were comfortable with use of the KIEMS, it was observed that voter identification took less than 1 minute and the entire voting process about 5 minutes per voter.

Periodically, after every two to three hours, the Presiding Officers sent tallies of the total votes cast. The Presiding Officers said they were sending the results to the Returning Officers at the constituency centers. They used their mobile phones to send the tallies through SMS.

4. Closing procedures

Polling stations observed closed between 5.00 pm and 6.55 pm. After the last voter was out of the station, the Presiding Officer closed the voter identification system on the KIEMS device. The device showed the time it was used to identify the first and the last voter, the total number of people who had voted, the registered number of voters in that station, the voter turnout percentage, the number of voters identified through biometrics, and through alphanumeric and the closing time of the polling station. Observers

⁴ <https://www.iebc.or.ke/uploads/resources/WVJh8ehMO3.pdf>

thereafter noted the Presiding Officers taking custody of the KIEMS kit before starting the other closing procedures.

5. Vote counting procedures

Vote counting was done manually with party agents, law enforcement and observers in attendance. No supporters were allowed in the vicinity of polling centres. It was observed that there was consultation in the cases where the validity of a ballot was in question. For instance, Presiding Officers asked agents to confirm rejected and spoilt ballot papers. In cases where there was no agreement about a ballot, the Presiding Officer recorded it as objected.

6. Transmission of results

Once the tallied results were ready and agreed upon, the Presiding Officer filled out the form 34A. The form 34A was signed by the Presiding and Deputy Presiding officer, and party agents. The results were then entered into the KIEMS device and transmitted. Thereafter the duly filled form 34A was scanned and transmitted. IEBC stated that the results were transmitted to the particular constituency tallying centre, where they would be verified, and then submitted to the county tallying centre finally to the national tally centre in Nairobi.

Observers noted that the different party agents were allowed to observe as the Presiding Officer interacted with the KIEMS kit in transmitting the tallies. Many party agents took pictures at every step of the transmission process including the confirmation messages and logs after transmission was complete.

Challenges witnessed in some areas during transmission of results were related to the network. In one station, the Presiding Officer and observers could not confirm from the KIEMS screen, if the results and scanned document had been transmitted. They called the neighboring Presiding Officer to assist and it was only after changing the network that they were able to submit.

7. Tallying procedures

In tallying centers, observers saw Returning Officers announcing results. There were screens and projectors where those present could see results from the IEBC website⁵ as they streamed in. It was possible to see results from different areas of the country.

Summary of observations

1. Devices had sufficient power throughout the polling and transmission of results process and where the device ran low in power, the provided power banks were able to keep the kits powered.
2. No use of the manual register was observed in the polling stations that were observed.
3. It was noted that Presiding Officers gave an update of number of voters identified on the KIEMS kit at 9.00am, 12.00 noon, 3.00pm and 5.00pm. In some stations, the observers noted that the Presiding Officers called to report these updates, others sent SMS, while in others, the officers just reported them in the polling station diary.
4. Learning curve: Some Polling Clerks did not seem confident with the KIEMS at the commencement of the process. It took a little longer than necessary to get which finger was appropriate to use as well as amount of pressure to apply in placing the finger on the KIEMS.

⁵ Kenya General Elections 2017 Results <https://public.rts.iebc.or.ke/results/results.html>

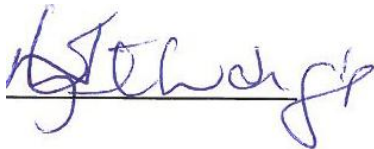
However, many were able to process faster after an hour (around 7am). But when the devices were switched to another user, the speed reduced as the new user had to undergo the normal learning curve. Nonetheless, by around 11 am, they seemed to have got the hang of it and started processing people in a faster way.

5. Technical challenges: there were some challenges in accessing networks in some polling stations but these were all resolved within ten minutes. There were several Presiding Officers that did not remember their passwords and they sought assistance from fellow officers. One polling clerk reported that “the network went down” when she connected the gadget to the power bank but the KIEMS was back in operation in about two minutes.
6. Voters had been advised not to take photos of their ballot.
7. The tallied results at the polling stations observed were in sync with the form 34As that were electronically submitted to the IEBC forms portal⁶.
8. Availability of communication services: It was possible to use mobile phone around the polling stations for calling, Internet and social media.

Conclusion

In the preliminary, we note that the use of technology in voter identification and transmission of results from the polling stations enhanced the efficiency of the election. We continue to observe ICT aspects of the election such as availability of communication systems and access to information.

KICTANet is preparing a comprehensive report of the observation mission.



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⁶ IEBC Forms portal <https://forms.iebc.or.ke/>