KICTANet "Talk to IEBC" online discussion on Tech Concerns report

Submitted to the Independent Electoral and Boundaries Commission

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1.   Introduction

On July 13, 2022, the Kenya ICT Action Network (KICTANet) paid a courtesy call to Kenya's elections management body, the Independent Elections and Boundaries Commission (IEBC). The aim of this meeting was to discuss the role of technology in the upcoming elections and beyond, and how KICTANet can collaborate with the IEBC in line with its mandate of delivering free, fair, and credible elections.

In attendance were IEBC Chairperson, Mr. Wafula Chebukati, IEBC ICT Committee Chair, Commissioner Justus Nyang'aya, IEBC Legal Affairs Chair, Commissioner Irene Masit, Commissioner Francis Wanderi, Commissioner Prof. Abdi Guliye, Commissioner Boya Molu, the Commission Secretary and Chief Executive Officer (CEO) Marjan Hussein Marjan and IEBC's Director of Information Communication and Technology (ICT), Michael Ouma.

The KICTANet delegation was led by the convenor/CEO, Grace Githaiga, accompanied by trustees: John Walubengo, Elizabeth Orembo, Victor Kapiyo, Mwendwa Kivuva, and Barrack Otieno. Also in attendance was David Indeje, KICTANet's Communications Officer.

1.2.   The issues that KICTANet relayed to the Commission were:

- Concerns about online misinformation and disinformation, the need for the IEBC to use digital technologies to proactively share information on the election, and to communicate to the public in simple messages relevant to the ordinary Kenyan.
- KICTANet requested the Commission to put in place measures to broadcast the tallied results on a real-time basis as it would play a crucial role in enabling the public to verify and understand the tallying process for the average Kenyan. Currently, the IEBC only plans to have on their portal images of Form 34A from the polls. This decision was made following the Supreme Court judgment on the legality of the text data that the Commission displayed during the last general elections.
- Election observation focused on technology use, publication of information on the technology to be used, hosting of election data, privacy and security of the technology to be used, state of preparedness for the Commission, capacity building, and stakeholder engagement. KICTANet offered to conduct a training session on Cyber Hygiene.
- KICTANet also raised concerns about election data being hosted in the cloud. IEBC clarified that voter data was not in the cloud and that it was domiciled in their data centers. The only data on the cloud was information relayed using the results transmission system which did not contain personally identifiable information.
- KICTANet offered to provide a platform through which IEBC could engage with the ICT community in Kenya continuously. Commissioner Irene Masit noted that technology was the most misunderstood issue between the IEBC and the public. This gap in understanding could

only be closed through robust engagement. KICTANet has continuously engaged with the IEBC and other agencies such as the National Cohesion and Integration Commission in Kenya (NCIC). During the 2017 elections, KICTANet deployed a team of community volunteers to observe the use of technology in voting and transmission. The network also worked with the NCIC to support its work in tackling online misinformation and hate speech. Earlier in March this year, KICTANet held a roundtable with Meta to discuss the challenges in the use of online platforms, especially content moderation, privacy, misinformation, and disinformation.

2. Talk to the IEBC virtual discussion summary on KICTANet

2.1. Questions

Through its mailing list, KICTANet engaged its members in a two-day moderated discussion that sought to highlight underline technology concerns that members of the network have ahead of the election. The discussion took place on Thursday, July 14th, 2022, and Friday, July 15th, 2022.

The online discussion sought to answer the following questions:

1. What issues do you have so far as technology and elections are concerned in Kenya?
2. What recommendations do you have so far as the use of technology and elections are concerned in Kenya?

2.2. Responses/Concerns

The following were responses from members of the network:

ISSUES/CONCERNS	RECOMMENDATIONS
A keep it simple approach	Kenyan elections are some of the most expensive, using funds that could go to development purposes. Technology should be an enabler to simplify processes. If we trust transacting money using our phones, we should consider this option for voting.
Avail information in accessible formats	Some effort is required to convert PDF tables to CSV files that can be more easily analyzed using computer programs.

Publish standardized machine-readable data	The report IEBC published regarding the 2013 election is different from what was published in 2017 and it is again different from the 2022 tables. Posting PDFs makes using that data harder and creates room for error as the conversion of such data to formats like CSV increases entropy. This request has continuously been made and the perception of those who have requested it is that there is more to this refusal than plain technical limits.
IEBC Website	Attention should be dedicated to the official website as the main communication channel. For voter education, summaries of the requirements and responsibilities associated with each elected position should be provided in simple formats such as infographics and diagrams/strips.
Information in Kiswahili	Should be on the IEBC website. The website has very little information.
Transmission of results	Results transmission can also be done by USSD, not just by the internet. A credible process cannot be ensured by ICT aspects alone, though ICT can increase efficiency. Observers should also be able to report results that are announced at polling stations.
Law on data protection	While the law is there, the educational and technical aspects seem less well developed to provide data protection.
Holistic planning is missing	Many polling stations are schools, so purchasing infrastructure just for the election and not having a reuse plan may be a waste of resources. -It may be worth comparing information provided to voters and procedures followed in other

	African countries, for example, South Africa and Ghana: https://www.elections.org.za/pw/Downloads/Documents-Voter-Education-Materialhttps://ec.gov.gh/elections-instructions/
Lack of transparency	Lack of transparency and or open sharing of important information with the public as regards the technological infrastructure: the last Presidential elections were nullified by the Supreme Court essentially due to technological issues, making Kenya the 3rd country in the world to have this happen. There should not be a repeat of this situation, especially as Kenya can not afford the socio-economic repercussions of such a scenario. Additionally, technology is reliable if all the supporting factors are in place. There are concerns about the technological preparedness of IEBC for the forthcoming General Elections (GE).
Integration and System testing	In the last election, both the software and hardware were from a similar provider, but there were issues that resulted in many votes not being counted. This time around, there are two different providers, namely Smartmartic and OT Morpho, now IDEMIA. Such scenarios can raise challenges of simulation. Has the effectiveness of the integration of the two systems been tested? And if they did test how was this done, as voters are custodians of their own biometrics? Would they not be required for said testing? If they did use voters to test the system, for example, during the voter registration process, then IEBC should be transparent and gazette or share with the public particulars of where such testing was conducted,

	and the size of the test group. Or will the effectiveness be tested during the GE? This would be highly problematic with no room to resolve challenges in a timely fashion.
Voter data	It has been alleged that the last "custodian" locked IEBC out due to nonpayment of money owed for services provided. If this is the case, then how was the data migrated? Even if IEBC did have access to said data, the issue still remains in accordance with our Data protection act. What is the status of the residual data held by the other party, as this raises data privacy and protection concerns as regards citizens' data?
Technical audit	KPMG conducted an audit but it is not clear if they facilitated a technical audit. It would be imperative that a technical audit be undertaken so that the true nature of the technical preparedness of the IEBC systems is known before the elections. The results of such an audit should be made public to enhance public confidence in the transparency of our electoral system. This in turn denies politicians ammunition to "incite" the public as they are informed, and ensures public peace during our pre and post General Election periods.
Servers	The servers are more than 3 years old and so would need an upgrade as a norm. Has such an upgrade been effected? Considering that the voter numbers have increased, will the current servers have adequate capacity? There is a need to perhaps look for other solutions as a matter of urgency, taking into account data protection considerations. IEBC can look into borrowing capacity from other major government servers that hold sensitive

	information as a norm, assuming they have extra capacities, such as KRA or CBK.
Theft of KIEMS kits & auditor general's report	Earlier this year, the Auditor General's report indicated that nearly four thousand KIEMS kits, plus laptops, drives, etc., were stolen from IEBC. What is the status of this? Have they been recovered? This raises major concerns, especially as the KIEMS kits are not geo-locked. If malicious actors have access to KEIMS kits and data they can manipulate, the integrity of the GE in August will be put to test. What steps has IEBC taken to address this concern? Additionally, albeit the SD cards and or flash drives are geo-locked there is still potential for mischief as the KIEMS kits are not geo-locked. A malicious player can insert another SD card. What is IEBC doing to curb potential mischief on this front?
Polling stations without network coverage	There are approximately 1100 polling stations that allegedly still do not have access to 3G or 4G network coverage. The standard response from IEBC when this issue is raised is that they will utilize satellites. Have the said satellites been identified and or deployed? Have they been tested for effectiveness before the GE or will they be tested on election day? Can the IEBC Gazette the said polling stations so that the public is aware of them in the spirit of enhancing transparency and trust in the electoral process?
OCR (optical character recognition) technology	It is not clear if IEBC does have OCR technology. If the Commission does not have, then for

	aggregation purposes this will have to be done manually and human error can arise (both accidental or intentional), as this is always a risk where the human factor is a component.
	If this is the status quo then what measures has IEBC put in place to secure this process?
Biometric recognition challenges	As a norm, the elderly have issues with their biometrics being recognized as do those who have suffered injuries after giving said biometrics etc. In the last election, this was problematic. What steps has IEBC taken to address this issue? While it is arguable people can use their Identification Documents as an alternative, there is a concern about the mischief that can arise from KIEMS kits that are not geo-locked, as well as the Auditors General's report concern discussed above. Malicious actors can use this as a workaround to avoid presenting biometrics and relying only on their "identification documents''. What steps has IEBC put in place to curb this?
Civic education and regular updates even on the IEBC websites	IEBC has not been aggressive in much-needed civic education to sensitize and update the public on the general elections and even their website can be better utilized. In all of this, accessibility of information to the differently abled is an important factor and a democratic right. How has IEBC addressed this? Even on election day what steps have been put in place to protect the privacy of the differently abled but enable them to exercise their democratic right fairly?
Cyber hygiene awareness training for IEBC staff	95% of cyber incidents are due to the human factor i.e. both malicious or accidental factors. As such, what cyber hygiene training has the IEBC staff been given? For instance, even charging devices at known polling stations by plugging

	them into the available power sockets can be vectored to upload malware pre-installed by malicious actors. Perhaps KICTANet which has recently been part of a project that developed a cyber hygiene curriculum can train the IEBC staff virtually and take them over the basics to secure the electoral systems in even a two-hour session. People can only secure themselves and their systems from risks and dangers they are cognizant of.
Backup power	What backup power does IEBC have at each polling station i.e. both generators and or solar? IEBC needs to realize that with great power like they have, comes great responsibility to uphold the democratic rights of Kenyans to fair and free elections, and not allow technological issues that are resolvable to curtail this right again.
Need to develop a voting app	The IEBC should consider developing a voting app akin to the MPESA app. This would allow voters to vote from wherever they are, and election day would not need to be a "holiday". There would curb violence and voter movement, suspicions, long lines on the voting day, etc.

Website: www.kictanet.or.ke
Twitter:www.twitter.com/kictanet
Instagram: www.instagram.com/kictanet
Facebook: https://web.facebook.com/KICTANet/
LinkedIn: https://linkedin.com/company/kictanet