

Evaluation of the Somaliland Voter Registration System: Presentation to the political parties' technical representatives)

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1. Introduction:

- a. Creative is independent of Interpeace, the donors, etc
- b. Three person team consists of
 - i. Myself → a registration and electoral systems process expert,
 - ii. Patrick Quirk → Creative's technical manager,
 - iii. Dr. Ben Bavarian → independent expert on biometric systems development and implementation
 - iv. Working with Jeff Fischer → EPP Director at Creative

2. Key Findings from my time in Hargeisa

- a. This process has been transparent and in accordance with generally accepted best practices and standards associated with genuine elections
 - i. Looked specifically at human rights Covenants and on standards required by European Union and other regional organizations
- b. Overall system is sound
- c. Data is well protected
- d. Virtually no disenfranchisement of genuine registrants, which is impressive & positive
- e. But the biometric matching systems, while functioning, are not identifying as many duplicates as expected

3. Some statistics

- a. Over 1.35 million actual registrations
 - i. Over 50% of registrations have no fingerprint - in the majority of cases, this appears to be due to negligence of the operator and not failure of the system, although impossible to estimate percentages
 - ii. Evidence of systematic abuse of the system such as over 150 registrations with same fingerprint and different faces
- b. After running the AFIS and FRS scrubs, 45,548 records identified as duplicates
 - i. When added to the 96,096 scrubbed for no biometric data and roughly 7,000 name birthdate matches,
 - ii. 149,151 records placed on the invalid list
- c. Leave 1.2 million on the valid list
- d. Which many feel is still too high.

4. Fingerprint Identification (AFIS) and Facial Recognition (FRS) programs both sound

- a. BUT the interface between the two programs (using parameters intended to discard as many multiple registrants while minimizing invalidation of legitimate registrants) is not operating as well as expected.

- b. A key factor for the challenges in developing the FVL is the unprecedented introduction of 2nd system of FRS after the registration (combined AFIS/FRS systems are normally developed and implemented from the start).
 - c. The FRS system was introduced to rescue VR system after the extensive abuse of the VR.
 - d. This introduces huge complications into software programming.
 - e. System is allowing through too many double/ multiple registrants – resulting in 1.2 million registrations for draft VL
 - f. Our preliminary tests of the system indicate
 - i. The system is indeed finding duplicates
 - ii. But not at the rate expected when the system designed.
 - iii. AFIS is catching a high percentage
 - iv. FRS not as many
 - v. Still waiting on the technical expertise of Dr. Bavarian to explain what is happening here and whether the performance can be improved.
5. So there are two questions:
- a. Why are the systems not finding as many duplicates as expected?
 - b. What are the alternative pathways forward?
6. Alternatives and Paths Forward
- a. Throw out the whole system: but loss of immense effort and cost [and unique opportunity for Somalilanders] - and system is basically sound. Would make electoral planning and budgeting extremely difficult. Would undermine popular confidence in the election. This is NOT an advisable option.
 - b. Adjustment to parameter 7: The program is only excluding registrations if **BOTH** fingerprint AND face match – but could instead exclude
 - i. Those with FRS match but not AFIS (about 37,000) → Given my strong confidence that the FRS scrub is not generating false positive, I think this should be done
 - ii. Those with AFIS Match but not FRS (about 107,000) → This one is a little bit more tricky. While it could be done, a higher percentage of those scrubbed will not actually be duplicates because of operator errors during registration I talked about a few minutes ago.
 - iii. It might be possible to develop a more refined change to Parameter 7 where the AFIS matches are scrubbed only if they are an RC where more than a certain number of records all match a single AFIS
 - iv. Nevertheless, if all are scrubbed, would reduce by approximately 144,000
 - v. Bringing VL down to about 1.1m, which is sufficiently credible and acceptable.
 - vi. This is an issue where we need maximum cooperation between the NEC, Interpeace, and the political parties.
 - c. Extend time for production of a refined VL to enable a specialist team to make further fine tuning.

- i. If the political parties want a more robust VL, a specialist team can be brought in to develop further revised parameters
- ii. The NEC has the basis for a robust system and could allow more time for the VL to be produced
- iii. it is highly unusual in similar contexts that the VL is produced 2 MONTHS before election date. Bosnia and Herzegovina (3 days before), East Timor (similar).

Summary of Key Recommendations:

1. Given the time constraints, and a need for a totally automated system, the current FVL, with an adjustment to parameter 7 which would more effectively invalidate multiple registrants, is viable and technically sound and can be further reinforced with additional measures during the electoral process (see #4)
2. Additional time and resources could be put into a further developed list where possibly additional multiple registrations could be removed by doing a deeper analysis of the parameters and how special software could be developed to eliminate additional double registrants (while remaining fully automated).
3. There are no guarantees on how many further duplicate registrants can be removed, given the challenges of introducing FRS AFTER the capturing of photos (rather than integrating into the original system and intentionally capturing photos that comply with the Facial Recognition System).
4. Whatever is decided by the parties and NEC, strong awareness raising in advance of the election warning against double voting along with supplementary inking of fingers on Election Day are both critical additional steps that should be taken to further strengthen the system chosen.