Subject: RE: RLA

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Sent: Monday, June 05, 2017 2:49 PM
To: Wayne Williams <Wayne.Williams@SOS.STATE.CO.US>
Cc: Dwight Shellman <Dwight.Shellman@SOS.STATE.CO.US>; Jerome Lovato <Jerome.Lovato@SOS.STATE.CO.US>; Judd Choate <Judd.Choate@SOS.STATE.CO.US>
Subject: RLA

I'll take your Professor Stark and raise you my Doctor Mers.

As I repeatedly shared with the RLA committee, as a CPA I have designed and lived audit protocols that relied upon statistical methods. I continue to find no added benefit for Professor Stark's, RLA concept. As a replacement for any part of the current beginning to end election protocol with each of its controls, find the Stark RLA concept seriously weakens the insured credibility of our election process.

Since everyone seems to be impressed with and enamored with a title of "Professor" over on-ground logic and experience, I hired Dr. Mers, a Professor at the Air Force Academy, to fill my vacant Deputy of Elections position. I have built audits that utilized, as the statute calls for, "Statistical Methods in the Audit Protocol" but Dr. Mers speaks the speak of Statistical Methods in Academic terms. Perhaps he can bring sanity to the RLA process where I have failed.

Attached, find his review of the RLA process and it's illogical flaws.

Merlin Klotz

MEMORANDUM FOR Douglas County (DC) Clerk & Recorder

Subject: Question & Comment Regarding the Risk Limiting Audit (RLA) Process as Described by Mark Lindeman and Professor Philip B. Stark

1. Assumption of Homogeneity in the Data

    The RLA process as described is conducted on the cast ballots until an acceptable level of certainty is achieved. This is accomplished by reviewing random ballots until the sample approximates the election results (to within defined parameters) as noted by the Voting System (VS). This assumes a homogeneity of the data at X level (represented by the selected sample) which may or may not be valid. Additionally, the presence or absence of such homogeneity at X level neither supports nor detracts from the election results as tallied by the VS considering the totality of the ballots cast as opposed to a potentially representative sample.

2. Assumption of Value of Generated versus Actual Randomness to Process

    Random versus ordered is an analytical criterion based on a selected standard. In other words, what may be random by one measure is ordered by another. The members of a high-school basketball team standing in a row may be random by height but ordered by grade-point-average. So, the first question that needs to be asked is "random by what standard and for what purpose"?
    Ballots are returned to Elections for processing by a variety of means. Some are placed in one of 9 Ballot Collection Boxes placed across the county. Some are sent in the mail. Some are dropped off or marked in one of 6 Voter Service Polling Centers also spread across the county. These ballots are not ordered in any relevant manner or fashion other than that they are all from Douglas County legally registered voters. They come into the facility in random fashion based on multiple factors of everyday life. They come from various areas of the county. They are dropped off at all hours of the day, by people of all genders, races, religions, ages, income levels, and voting perspectives. The order and randomness inherent in the ballots extant is relevant to understanding the requirements and outcome of a fair and impartial election.
    What is the evidence to support the contention that the randomness extant and inherent in the cast ballots is less relevant to the process than that generated by a seed and a pseudo-random number generator (PRNG)? The added labor costs of using the seed and PRNG may not be justified by the value-added.

3. Assumption of Fallacy in the Current Audit Process

    The Internal Logic & Accuracy Test (I-LAT) is run by DC Elections personnel. This test randomly marks practice ballots for entry into the VS prior to the election. The results are then hand tabulated to ensure accuracy of throughput. This test is the re-done in the Public Logic & Accuracy Test (P-LAT). The election is then conducted and valid ballots from registered voters are entered, processed, and tabulated. Following this, a Post-Election Audit (PEA) is conducted under that same procedures as that of the I-LAT and P-LAT on 500 randomly selected ballots from the randomly ordered body of the cast ballots. This is to detect any processing error in the system that may have been missed.

    In order for an entity to tamper with the VS tabulations and not have it noted in the PEA, one must first tamper with the Voting & Tabulation Machines (VTM) located in the basement of the DC Elections building after the P-LAT and secondly, go back and change anything adjusted back

to the original configuration prior the PEA. There are multiple security procedures and protocols to secure the VTM and process and prevent such an event from happening.

<u>Personnel</u>: Personnel are trained and maintain appropriate chain-of-custody procedures when dealing with cast ballots from the time of receipt through the entire process.

<u>Physical</u>: The VTM are kept in the basement of the DC Elections Facility behind 3 locked doors. This area is open only to DC Elections staff. All others entering the area are under escort of the same. The area is under 24-hour camera surveillance and real-time monitoring when the building is closed.

<u>Virtual</u>: The VTM are networked on a closed system. In order for someone to achieve unauthorized electronic entry into the VTM, he or she would have to be physically in the Counting Room. The likelihood of which is mitigated by the physical security measures noted above. Additionally, the electronic security measures are extensive.

The VTM resides on a closed network and cannot access either the Internet nor the Douglas County Network. It is managed by a server which handles the antivirus definitions for all computers on the network. The computers require a Windows logon of which, there are various types of administrator and user accounts. The server, ballot creation, and tabulation computers are only accessible by the Elections Deputy and the Logistics & Technology Supervisor. Once inside of the computer, the Hart Voting System requires another logon which is administered by the system administrator, and then requires an encrypted USB key and another password to access any type of election data.

Finally, assuming the someone was able to successfully bypass all of the noted security measures, the VTM maintains logs of every keystroke and all activity on the system. These logs are checked regularly and automatically by system and DC Elections personnel.

Tampering with the VTM and having the activity go unnoticed is analogous to someone breaking into a bank secured under lock, key, security camera, alarms, a Quick Reaction Force, and an electronic monitoring system and robbing it immediately after an audit and then breaking back into that same bank and replacing the money, note for note, coin for coin, and spatial location for spatial location prior to the next audit. Simply given the complexity of such an event, the likelihood of occurrence is fairly low.

4. <u>Assumption of the Importance of Secure and Transparent Elections</u>

This is a valid and supportable assumption. Such events are critical to the foundation and continued function of American democratic republic. But secure and transparent elections cost money to administer and execute and utilizing the most efficient means of ensuring the coherency and consistency of such is the fiduciary responsibility of all public officials. The current DC Elections security processes and procedures combine to achieve this objective.

The personnel security checks in hiring and training processes and the chain-of-custody procedures provide a dependable and secure workforce. The I-LAT, P-LAT, and PEA, serve this objective by testing the VTM both immediately prior to and immediately after the actual elections.   The combined effect of these activities is to produce a legal, transparent, accurate, timely, and efficient realization of Douglas County voter will.

There seems to be little or no data nor logic to support a contention that when validated water goes into one end of a pipe and validated water comes out of the other end of a pipe and someone you trust is watching the middle of that pipe that water is not what you've got.

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