

Jerome Lovato

From: Harvie Branscomb <harvie@electionquality.com>
Sent: Monday, March 13, 2017 12:49 AM
To: Jerome Lovato
Cc: harvie@electionquality.com; Mark Lindeman
Subject: personal response to non-CVR county question

Jerome

I have contributed to Ron Rivest's overview of the RLA that he previously sent and agree with it. That is partially addressing the homework question. Mark Lindeman will be sending in a well hashed over view from the contingent of volunteer experts including Neal and myself and several others. Since I have not seen the final version of that document yet, I can't wholly endorse it, but am likely to, so I am providing a quick overview of my personal suggestion for moving forward, using much the same compromise approach as the ballot manifest document I just sent.

This is a special suggestion for 2017 only and not for the continuing future. The same interim simplifications are included as with the ballot manifest suggestion:

1) 2017 audit of all county-wide, single-county elections in CVR-capable counties to a preset risk limit- sample chosen by the SOS-run Audit Center to satisfy the narrowest margin countywide contest in each county. Risk measurements are reported for intra-county contests not shared with other counties. If any multi-county contests are audited it would be by pilot participation only, not a requirement.

2) 2017 audit of all county-wide, single-county elections in non-CVR counties as follows:

The required method may be voluntarily exceeded or alternatively bypassed with a different method by approval of the SOS (SOS to encourage 1 or 2 counties to participate in these tests of alternate methods).

The minimum requirement is a ballot polling risk limiting or in some cases of narrow margin contests risk measuring methodology designed to mimic the county performance of a CVR based RLA. AC interaction with the county would be almost identical. AC will calculate the risks using ballot polling math and call for escalation but will apply a limit to workload that will bump some contests, perhaps, into risk measurement mode (opportunistic) when they do not reach the risk limit when the workload limit is reached. The workload limit is prorated to address county resources. this ballot polling audit can serve non-CVR counties in 2018 and will prepare counties for CVR based RLA in 2018. It also can serve hybrid multi-county audits in 2018.

Alternate SOS and county-discretionary audit methods are:

- 1) hand count audit for hand count counties- at least one full recount of the narrowest margin contest by independent counters and preferably different hand count protocol;
- 2) batch comparison audit if it can be accomplished (using multiple memory cards in Hart, or multiple precinct scanners); ideally this will mean minimizing the size of the batch unit to be audited in election setup and SOS randomly choosing more batch units of smaller size than would have been used in the customary post-election audit;
- 3) "transitive" rescan and interpretation of ballots with separate scanner and, pseudo-independent software to produce CVRs that can be audited (will probably require outside help);

4) going beyond the SOS defined workload limitation that prematurely terminates the execution of the ballot polling audit and voluntarily escalating the audit to risk limits for at least the county wide contests. Obviously this option does not require SOS approval.

Data collected from these pilots can guide decisions for audit methods in 2018 when multi-county districts must be supported. Likely the CVR-based RLA will be supplemented in 2018 by at least some ballot polling audits in some cases for non-CVR counties. We will know much more about the ballot polling audit by then.

That is in a nutshell my suggestion based on much advice that has changed hands in the past few days.

Harvie Branscomb

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