

Maine's Vote Tabulation Situation with some context relating to Ranked Choice Voting (RCV)

Dick Atlee, 18 January 2016

(http://dickatlee.com/issues/elections/evote/maine_rcv/pdfs/maine_vote_tabn_details.pdf)

[This summary is derived from conversations and double-checking with staff from the Elections Division of the Maine Bureau of Corporations, Elections, and Commissions. However, all comments, implications and conclusions are mine.]

CURRENT STATE EQUIPMENT SITUATION

- In 2012 Maine contracted with ES&S (Election Systems and Software) to lease machines and ballot layout software until 2019, after which the contract will go out to bid.
- Municipalities don't have to pay for equipment necessary to support state elections unless they have fewer than 1000 registered voters.
- A municipality pays only if it needs more machines -- e.g. they are running local elections at the same time as state/federal elections, and want a second tabulator to handle the additional ballots (i.e., a second ballot is similar to doubling the number of voters)
- HAVA funds paid for the beginning, but will be depleted by the end of 2016.
- Equipment distributed last November was the last hardware addition the state could obtain under its current contract with ES&S, which expires on 12/31/2019
- There used to be several types of scanners around the state, but many were old and discontinued, and the state wanted consistency, so these were replaced with DS200's.
- About 260 out of 500 municipalities have them -- 125 were using older ones from before the ES&S contract; the others were former hand-count municipalities.

CURRENT STATE BALLOT SITUATION

- In recent elections there have tended to be 100K hand-count ballots, 600K tabulated ballots.
- Currently there are about 350 different ballot styles in the state.
- Hand-counted ballots are produced more cheaply -- they don't need all the control markings.

SECURITY

- State police handle the town-to-state transfer of hand-counted ballots and memory sticks.
- In recounts, ballots are sent to the state, recounted there, and then returned to the towns.
- Ballots stay at the town for 22 months (the length of time it would take for a Federal elections case to come up).
- The Secretary of State's office has had enough recounts to feel confident of the technology.

***It should be noted, however, that an effective hacking attack would
(a) guarantee vote spreads outside the recount trigger, and
(b) have the ability to determine whether voting is being done on Election Day or
for a pre-election test or post-election recount (i.e., the Volkswagen scandal).***

RANKED CHOICE VOTING ISSUES

The main conclusion related to all the following points is that for a variety of reasons RCV would preclude any possible return to hand counting.

- A demonstration of RCV done by RCVMaine in a Bar Harbor restaurant, involving a 4-way vote for favorite hors d'oeuvres and sorting people into corners of the room, was elegant in illustrating the process, but by simulating a single municipality with about 40 voters, it failed to illustrate the greatly increased complexity of 700K voters in 500 municipalities.

- In simple-choice "plurality" voting, only the town totals need to be sent to the state. However, RCV's mechanism of loser elimination and next-choice redistribution can't occur until all electronic *cast-vote records* (CVRs) are aggregated at the state level. As currently envisioned, this would involve sending **ballots** from hand-count municipalities to Augusta (or regional centers) to be scanned, and **memory sticks** from the others, adding an additional level of required electronic tabulation, and a requirement for expensive DS200 ballots in hand-count towns.
- Because of the large number of ballots, and the complexity of counting (not just sorting ballots into different piles based on simple-choice votes), hand counting of RCV ballots at the state level would be a practical impossibility.
- Recounts of statewide RCV elections would thus obviously also have to be done by tabulator, and would necessitate a change in the current state rule requiring that recounts be hand-counted.
- The state likely will use separate ballots for non-RCV and RCV races, so that recounts for non-RCV can proceed separately from the RCV additional rounds of counting or possible RCV recounts.
- In RCV elections, towns would still have access to who won by plurality in their town, since first-choice counts would be analogous to simple-choice voting.
- ES&S has higher-speed models, one or more of which would be necessary in RCV for state-level tabulation of ~100K ballots from towns not using tabulators.
- ES&S has a new version of software that can handle ballots (not the actual vote counting) w/RCV layout; this would require purchasing an upgrade.
- To handle the counting, a new algorithm would be required. ES&S custom writes these for each customer, given that rules for what counts vary over jurisdictions. Or it could be purchased from a third party (which might permit open-source code).
- The algorithm can put the cast-vote records into a spreadsheet, which can be publicly and transparently analyzed. This was done in Minneapolis and St. Paul in 2013: <https://www.minnpost.com/politics-policy/2013/11/still-confused-faq-ranked-choice-voting> with 50K ballots, but would be prohibitive in our 700K-ballot situation.
- Constitutional issues that might interfere with RCV (this is controversial):
 - Town level results must be reported to the Secretary of State;
 - Plurality defines gubernatorial victory; the same is indirectly true for House and Senate.
 - The legislature must be seated by the 1st Wednesday in December, another reason why hand counts of RCV might occasionally be problematic.
- To the extent that there would be much work and expense (including voter education) involved in a transition to RCV, the potential for a successful court challenge against it raises understandable concerns.
- Proof of concept test -- In 2015, Portland took 100 ballots from their 2011 15-candidate mayoral race and set things up so that 12 rounds would be required. They ran it with DS200s and with hand count. The results were the same, though in general that is not inherent "proof" in light of the possibility of a "Volkswagen" test-thwarting hack. The hand count of 100 ballots took 2.5 hours, indicating the practical impossibility of hand counts expanded from 100 to Portland's 30K or Maine's 600K.

Without an ability to effectively audit machine-counted election results, there is no guarantee of protection from computerized election theft. Of two possible audit mechanisms (see Audit page), neither is currently in effect -- nor will be after November -- or is even possible under current state law. So adopting RCV comes down to a significant choice:

some desirable election improvements vs. the future ability to trust our elections