

## Critical changes are needed to Holt HR811

<http://thomas.loc.gov/cgi-bin/thomas>

Note: This analysis was of the original committee version of HR811. HR811 was subsequently revised to alleviate our concerns # 1, 4, 7, 8, 11, and further study of # 3 and 6 relieves some concerns in those areas.

Holt's HR811 is an improvement over HR550 because, among other improvements, HR811 takes away the power to audit from the US Election Assistance Commission and gives it to state auditors; increases the number of manual counts when margins between candidates are small; funds the replacement of paperless voting systems; requires archival weight ballots that protect voter privacy; and comes as close as is possible in federal legislation to requiring the replacement of flawed DRE machines; but it still has crucial flaws.

1. **LOOPHOLE ALLOWS MANUAL AUDITS TO BE BYPASSED.** Section 327 permits states to avoid any manual audits when conducting state "recounts". Many state "recounts" involve no manual counts of voter-verified paper ballots, or involve fewer manual counts than HR811 requires or, like Utah, involve limited manual counts but never compare the manual counts with the electronic tallies used to count votes on the central tabulator. This exemption permits states to avoid independent audits altogether by redefining when they'll do "recounts". Independent audits should "always" be required, no matter whether election officials do "recounts" or not.
2. **NEGLECTS TO ESTABLISH FULL CITIZEN RIGHT TO OVERSIGHT.** HR811 does not require timely citizen or candidate access to election records that are necessary to verify electoral integrity, voter roll accuracy, voter disenfranchisement, and manual audits. Some states, like Utah, prohibit access to all election records, even summary records, detailed vote counts and voter registration records that the National Voting Rights Act requires to be publicly available; and other states only release election records long after election results are made official. Candidates cannot judge the integrity of their election outcomes when access to election records is lacking.
3. **INSUFFICIENT AUDIT AMOUNTS:** Fans of audit solutions recognize that Holt's audit amounts (10% audits for races with margins under 1%, 5% audits for races with margins between 1% and less than 2%, and 3% audits for races with margins 2% or greater) are inadequate. (Section 322) These numbers were pulled out of thin air, often giving under 50% chance for detecting even one vote corrupt vote count (count with error) in cases where just enough vote counts are corrupt to alter outcomes in U.S. House races. (The number of precincts in all US House districts is needed to do a thorough mathematical analysis.) Lack of minimum audit amounts mean lower chance for detecting outcome-altering miscount in the case of US House races with fewer number of total precincts. Appendix A shows how HR811's audit would give less than a 50% chance for success whenever the number of vote counts is less than average or margins are small. Audit percentages and minimum audit amounts for each range of margins can and should be correctly calculated to achieve a certain desired probability of success.
4. **EQUIPMENT REQUIREMENTS SEEM UNDER-FUNDED:** \$300 million is not enough to fund the purchase of precinct-based op-scan machines and ballot printers for voters with disabilities and non-English-language voters, for all precincts who currently have voting machines which lack paper ballots. (Although the amount may be enough to purchase new machines for jurisdictions with paperless DREs like MD, GA, FL...) If there are approximately 185,000 U.S. polling places, and even if only approximately one-third of them are defined as remedial and it costs \$10,000 per polling location for a ballot printer and op-scan device, then it would cost approximately \$650 million to replace all the electronic ballot voting systems which currently do not cast votes on archival quality paper ballots, are not fully auditable, and violate voter anonymity. It also seems to require text conversion technology in every polling place for voters with disabilities to independently verify their ballots, at up to \$7000 per machine.
5. **UNDER-QUALIFIED COMPOSITION OF STATE AUDIT BOARDS:** HR811 Section 321.(b) proposes a composition for state audit boards which does not allow much-needed mathematicians, computer scientists, election activists, and gaming experts to be on the election audit boards, and sets prohibitive

requirements for members of the Green, Libertarian, Constitution, or other small parties' members to be on the state audit boards. The mathematics of election audits is different than in other industries and can be complex due to the variations in the margins between candidates, size variation in the numbers of ballots in each vote count, and other factors.

6. EXCEPTION COULD POSSIBLY ALLOW LOSS OF SECRET SECURE BALLOTS for the Military voters, who are "allowed" to vote via email. Section 2.(a)(2)(C)
7. LOOPHOLE ALLOWS MACHINE COUNTS TO SUPERCEDE VOTER VERIFIED PAPER when fuzzily described circumstances arise. Section 2.(a)(2)(D) Legislation should instead state that:  
*"In the event of any inconsistencies or irregularities between any electronic records and the voter-verifiable paper records, the paper records shall be the true and correct record of the votes cast, except in the case where evidence exists that indicates that the paper record has been tampered with or damaged, in which case, if an outcome is in question, then a court will decide."*
8. LOOPHOLE ALLOWS INTERNET CONNECTIONS for central tabulators and ballot definition software. This is unnecessary since portable media can be used to transfer vote counts from the central tabulator or to the ballot programming devices.
9. NEGLECTS TO OUTLAW ELECTRONIC POLL BOOKS. Having paper ballots for voters in case of power failure or electronic failure does no good if there are electronic poll books that can disenfranchise voters. Voters have been disenfranchised in both MD and CO due to the use of electronic poll books.
10. LOOPHOLE ALLOWS MANUAL AUDITS TO BE GAMED: Section 324(c) Vote miscounts could be hidden and have a higher chance to escape detection in two or more large-size counts of absentee, mail-in, overseas, or military ballots; or be hidden and escape detection in larger-size precincts. Must change "and" to "or" in Holt's language, or simply require that all mail-in ballots are to be counted in batches of close to the same size as a median-sized precinct.
11. MAKES THE ELECTION ASSISTANCE COMMISSION (EAC) PERMANENT: Because the EAC is appointed by the President as an agency with authority over federal elections there is a conflict of interest. The EAC could be replaced with a Standards Board, which is a 50-state representational body of qualified top state and local election officials. The EAC duties, as described on their website and listed below in lower case, could be delegated as follows (in CAPS):
  - Generate technical guidance on the administration of federal elections. –TO NIST & STANDARDS BOARD
  - Produce voluntary voting systems guidelines. –TO NIST & STANDARDS BOARD
  - Research and report on matters that affect the administration of federal elections. –TO STANDARDS BOARD & CITIZENS GROUP
  - Otherwise provide information and guidance with respect to laws, procedures, and technologies affecting the administration of Federal elections. –TO STANDARDS BOARD, NIST & CITIZENS GROUP
  - Administer payments to States to meet HAVA requirements. –TO GENERAL SERVICES ADMINISTRATION
  - Provide grants for election technology development and for pilot programs to test election technology. – ELIMINATE THIS FUNCTION or TO NIST.
  - Manage funds targeted to certain programs designed to encourage youth participation in elections. – TO FEC
  - Develop a national program for the testing, certification, and decertification of voting systems. –TO NIST & STANDARDS BOARD
  - Maintain the national mail voter registration form that was developed in accordance with the National Voter Registration Act of 1993 (NVRA), report to Congress every two years on the impact of the NVRA on the administration of federal elections, and provide information to States on their responsibilities under that law. –TO FEC
  - Audit persons who received federal funds authorized by HAVA from the General Services Administration or the Election Assistance Commission. – HAND OVER TO GAO
  - Submit an annual report to Congress describing EAC activities for the previous fiscal year. – AS APPROPRIATE TO ENTITIES PICKING UP FUNCTIONS AS DESCRIBED ABOVE

Thank you to Bev Harris, Brad Friedman, Nancy Tobi, and Paul Lehto for pointing out some of these flaws; and to Tobi for suggesting ways to re-allocate US EAC functions.

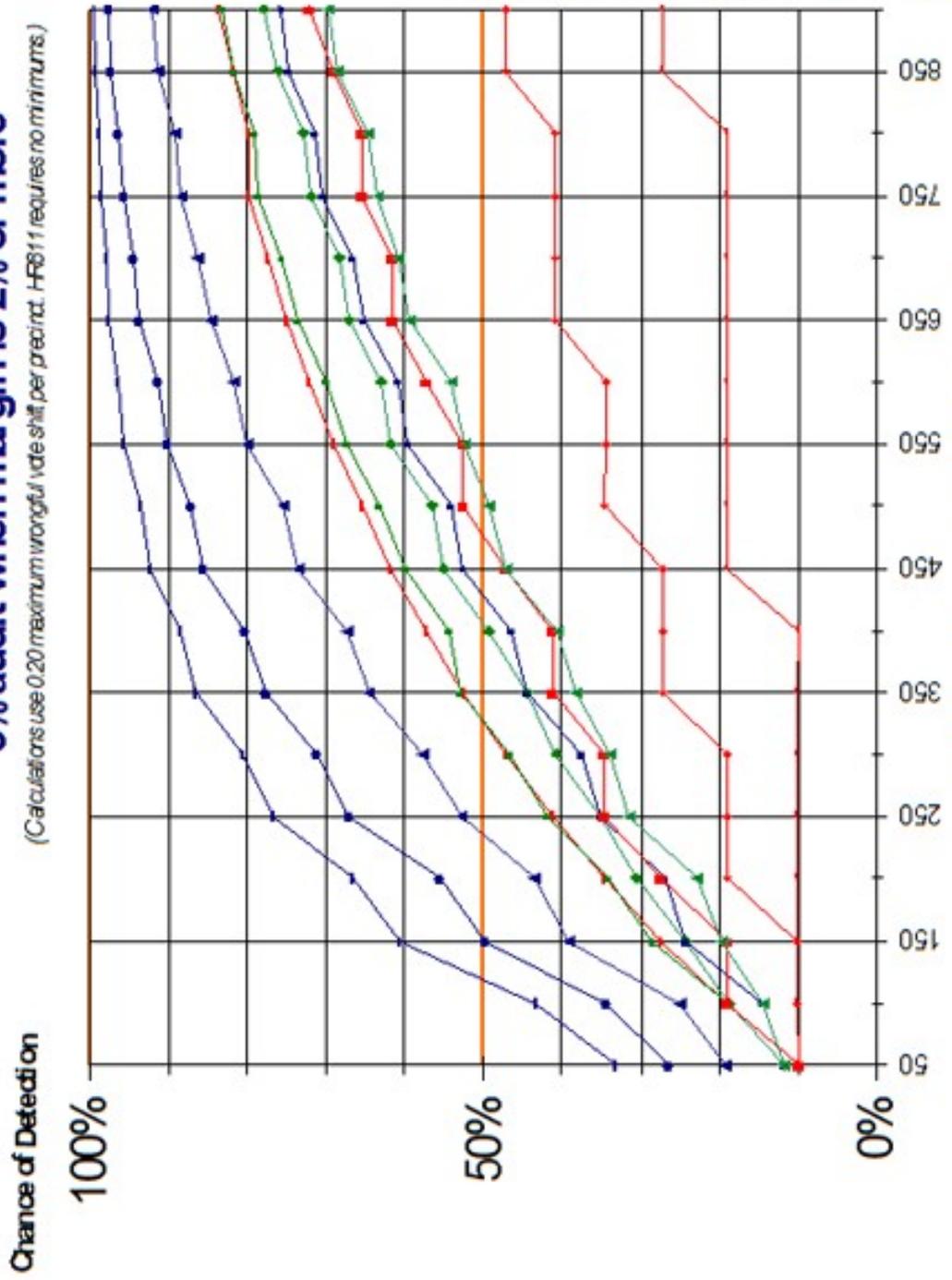
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## Evaluation of HR811 Election Audit

10% audit when margin is less than 1%  
 5% audit when margin is btw. 1% and less than 2%  
 3% audit when margin is 2% or more

(Calculations use 0.20 maximum wrongful vote shift per precinct. HR811 requires no minimums.)

- 6.5% margin w/ 3% audit
- 5% margin w/ 3% audit
- 3.5% margin w/ 3% audit
- 0.75% margin w/ 10% audit
- 1.5% margin w/ a 5% audit
- 1.25% margin w/ 5% audit
- 2% margin w/ 3% audit
- 0.5% margin w/ 10% audit
- 1% margin w/ 5% audit
- 0.25% margin w/ 10% audit
- 0.1% margin w/ 10% audit



Blue, green, & red lines show probabilities for races with particular margins between candidates. Lines falling under the horizontal orange line mean that the chance is less than 50% of detecting sufficient vote miscout to alter the outcome. NOTE: Chance of detection is less than 50% when the number of vote counts (precincts) &/or margins are small. (lower left side of chart)

Total Number of Vote Counts

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