

Testimony to the Oregon Senate Committee on Rules 4/10/19

Stephanie Singer

My name is Stephanie Singer. I live in Portland Oregon and my State Senator is Michael Dembrow. I am a data scientist specializing in election security. I am here on behalf of Verified Voting, a nonpartisan nonprofit organization. Verified Voting's mission is to strengthen democracy for all voters by promoting the responsible use of technology in elections. I did graduate work in computer science at Stanford University and earned a Ph.D. in mathematics from New York University. I served four years on the Philadelphia County Board of Elections, a position I won by election in a district of a million voters.

I am a recognized expert on Risk Limiting Audits. I have had substantial experience working with election officials to implement Risk Limiting Audits -- including officially binding audits, pilot audits and practice audits -- in Colorado, California and here in Oregon. I worked on the team at Free & Fair, an Oregon company, that produced the software used in those audits. On behalf of Verified Voting I have contributed substantially to many written documents about Risk Limiting Audits, including *Principles and Best Practices for Post-Election Tabulation Audits* and *Checking the Paper Record: A Guide for Public Oversight of Tabulation Audits*.

Risk limiting audits are the gold standard for tabulation audits because they are the most efficient known process for providing measurable evidence of the correctness of election outcomes.

I am familiar with statutes, regulations and proposed legislation on the subject of tabulation audits all across the United States. SB 944 stands out as one of the best bills in the country. In particular:

- The definition of "risk-limiting audit" is both mathematically correct and accessible to many non-mathematicians. This is a rarity, and the Oregon Senate should be quite proud of this.
- The legislation requires risk-limiting audits in Oregon to adhere to the principles described in *Principles and Best Practices for Post-Election Tabulation* audits -- principles developed by leading experts in the field and endorsed by the American Statistical Association, the Center for Internet Security and the Brennan Center for Justice, among other organizations.
- In particular, the bill requires that the audits "be based on direct visual human examination of elector-marked ballots." and "ensure that no change or error in technology used to assist with the audit could result in an undetected change in the results of the audit."
- The bill is realistic for Oregon right now. Right now, not every county has the technology that enables the most efficient auditing. This bill allows counties to transition to risk-limiting audits at their own pace. At some point in the future, when all counties have upgraded their equipment -- a process the legislature could speed up by helping with funding -- it will be appropriate to require risk-limiting audits across the state. For now, the opt-in nature of this bill is an excellent feature.