This is the outline of my panel presentation: *Plenary Session:* "Transparency in Post Election Audits". Lawrence Norden *(chair)*, Ron Rivest, Joseph Lorenzo Hall, Arlene Ash, Howard Stanislevic, Post Election Audit Summit; American Statistical Association/Verified Voting Foundation/NYU Brennan Center for Justice/Common Cause/Citizens for Election Integrity Minnesota/The Florida Voters Coalition (2007).

Transparency in Post Election Audits

What does transparency mean?

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    - If I asked each of you in this room to define transparency, I'd get just as many answers.
    - Transparency is a diffuse concept... I define it as having three objective components and one subjective component:
        - **Access:** To what extent is the system available to voters so that they may learn about its functionality?
        - **Oversight:** To what extent does the system support observation of its functionality?
        - **Accountability:** To what extent does the system keep the evidence necessary to hold it as well as the people and procedures that surround it, responsible for failures and/or fraud?
        - **Comprehensibility:** To what extent can the public actually understand how the system works.
    - In addition to the objective / subjective angle, only Access is quantifiable.
        - That is, it is hard to quantify Oversight and Accountability.

The importance of transparency

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    - Election acitivites, especially audit-related activities, need to be as transparent as practicable.
    - There's a careful balance that we must draw.
    - Any election where all post-election activity is done in secret or in a manner that doesn't support oversight and accountability will engender zero confidence in the electorate.
    - Unfortunately, facilitating transparency isn't easy or cheap... but we need to make it as easy and cheap as possible.
    - Part of the difficulty is that deep auditing just isn't done by elections jurisdictions.
    - Most jurisdictions count the number of ballots returned and compare to signatures in a poll book and attempt to reconcile egregious discrepancies.
    - Some jurisdictions don't even do that.
    - We need to switch from a "dotting the i's and crossing the t's" mentality in post-election audits to a "let's check our work" mentality.
    - This goes beyond counting paper records to other methods of post-election auditing such as, for example, checking voting system software and examining voting system event logs.
    - Increasing audit activity is going to be hard... it's going to require new tools, new procedures, new resources and, perhaps most importantly, new laws.
    - The new laws we need will be different than laws we've had before in elections... because auditing is such a fragile and careful process, getting one thing wrong in legislation can seriously impact the quality of audits conducted.
        - examples of legislation problems from california:
            - 15360 doesn't require random drawing of precincts chosen past the 1% sample.
            - Another problem is the length of the canvass period. In California, the canvass

must be completed by E+28 (28 days past election day). That's fine for some counties, but large counties really need more time to do the canvass and associated audit well. This is going to become especially acute with the new CA SoS post-election audit requirements.

What can we do to make things more transparent in audits?

- What can we do to make things more transparent in audits?
    - In terms of procedures, the CA SoS's requirements released last night are a good start.
        - Precinct tally results must be available before the manual tally begins.
        - Officials must begin the tally as soon as practicable after random selection.
        - Tally must be conducted in public, by hand.
        - Must be public notice about dates and locations of precinct selection and tally process.
        - Officials must keep data-rich logs of the tally process.
        - Undervotes and overvotes must be tracked and reported (although there's no mention of tracking and reporting voided paper records).
        - Tally staff must count without knowing the target tally number to avoid bias.
    - To aid observing we might want VVPATs and paper records displayed, and perhaps recorded and/or streamed, via a document camera or other projection system.
    - vendors need to support auditing... it's not something that will sell more voting systems, granted, but records need to be designed for ease of auditability, both the paper records and election databases.

Moving towards Machine-assisted auditing

- To end, I'm going to say something I think a lot of you won't like to hear... at least the activists, I can imagine. Machine-assisted auditing, a la the thinking that Joseph Calandrino and Ed Felten's group has been working on at Princeton, is where we need to be. This will allow us to do statistically powerful audits quickly and in a resource-conservative manner. And these audits can be efficiently checked by a manual count, just like we're thinking about now.