

1550 Bryant Street, Suite 855
San Francisco, CA 94103-4879
August 23, 2005

Re: August 10 Bill Analysis of SB370

The Honorable Bruce McPherson
Secretary of State
1500 11th Street
Sacramento, CA 95814

Dear Secretary McPherson,

On August 10, the Legislative Affairs Unit of your office issued a Bill Analysis of S.B.370 recommending an oppose position. (Copies of both the current text of S.B.370 and the Bill Analysis are attached.)

A number of the arguments presented in that Bill Analysis are incorrect and contradictory and we provide counter-arguments below. Accordingly, we respectfully request that your office reexamine this proposed legislation and issue a revised Bill Analysis that more accurately addresses the relevant issues.

First, in its "Description" and "This Bill" sections, the Bill Analysis incorrectly summarizes the provisions of S.B.370 by treating the phrase "paper record copy" as synonymous with "voter-verified paper audit trail" (VVPAT). However, it is clear that subsection (b) of the amendment to §15627 of the California Election Code proposed by S.B.370 treats these as legally distinct entities; the "paper record copy" is merely a copy of the electronic record, and that copy is not verified by the voter, while the VVPAT is voter-verified by definition.

Second, the "Bill Analysis" is mistaken when it asserts that S.B.370 would require that: "...*the paper record must be the official paper audit record and must be used in the manual tally and any recount...*".

As can be seen from reading the actual text of the legislation, subsection (b)(1) of the amendment to election code §19253 (as proposed by S.B.370) requires that the "voter-verified paper audit trail", and not the "paper record", shall be considered the official paper audit record for use in the manual tally and any recount.

Third, the "Analysis" section makes a number of arguments that are specious and contradictory. A point-by-point rebuttal is provided, in the same order as the arguments were presented in the "Bill Analysis". The quoted arguments are shown in *italic* font, with the rebuttals in plain text.

According to the author [of S.B.370, Bowen], if the purpose of the 1% manual recount is to try to

verify the accuracy of the vote, it makes sense to use the paper receipts produced by DRE voting machines to verify the accuracy of the machines and the votes at the same time... First, note that S.B.370 does not utilize the ill-defined term “paper receipt”. We assume that the Analysis refers to the voter-verified paper audit trail (or VVPAT) when it makes reference to “paper receipt”.

Second, the VVPAT, by definition, is verifiable by the voter but the electronic ballot record recorded by the DRE is not. If the VVPAT does not reflect the voter's intent, the voter is given the opportunity to reject it, along with the corresponding electronic ballot record, and to cast a ballot whose VVPAT correctly reflects that voter's intent.

Accordingly, since the VVPAT is verifiable by the voter, it provides a more definitive record of the voter's intent than the electronic ballot record that is not verifiable by the voter. **The fundamental purpose of the VVPAT is to provide an independent means of determining whether or not the DRE is accurately recording the voter's intended vote in the electronic ballot record.** Comparing the VVPAT to the corresponding electronic ballot record provides the most direct, transparent, and publicly-visible means of auditing the validity of those otherwise unverifiable electronic ballot records. Thus, the “Bill Analysis” is incorrect when it asserts:

No way to determine if DRE is accurately recording voter's vote: By comparing the VVPAT record (which is verifiable by the voter) to the DRE's electronic ballot record (which is not), one can determine if the DRE was “accurately recording the voter's vote”. If the two records match, then the DRE was accurately recording the voter's vote, and if they do not, then it wasn't. That is the whole point of using the VVPAT to conduct the mandatory audit.

Bill treats AVVPAT as ballot, but without ballot standards: Once again, the Bill Analysis appears to treat the VVPAT and the “paper record copy” as synonymous. We assume that this reference is to the VVPAT printout, because S.B.370 would require that printout (not the unverified paper record copy) to be the official audit record.

It is essential to note that different standards apply to different types of ballots and records. The VVPAT printed by a DRE is essentially an audit record, and not a ballot in the general sense. Given that the VVPAT:

- 1) does not have the same format as a paper ballot (i.e., it is a list only of selected choices rather than a full list of possible choices with selections marked),
- 2) is not used in the same manner by the voter as a paper ballot (i.e., the voter never touches it nor directly marks it),
- 3) is not treated the same as a paper ballot by election officials (i.e., it is never examined nor counted by elections officials except in the case of an audit or recount),

it is therefore not reasonable to expect that it should necessarily meet all of the same standards

(e.g., paper weight, water markings, overall layout and format) that apply to paper ballots. The VVPAT clearly does not have the same status as a standard paper ballot or optical scan paper ballot, since unlike those ballots, it is not: 1) the one and only record of the voter's vote, and 2) the ballot of record used for all counts (i.e., initial counts, audits, recounts, final canvass).

Standards for printed ballots not the same for AVVPAT: Neither do current law nor regulations establish these same physical standards for the electronic ballot record stored by the DRE. Nor do they establish these same standards for the unverified "paper record copies" of the electronic ballot records that can be printed after the polls close. A separate set of regulations apply to the electronic ballot records stored by DREs, just as a separate set of regulations apply to the VVPATS printed by DREs.

AVVPAT might not retain its integrity through audit, recounts: If the Secretary of State is concerned that the existing standards and regulations for either the VVPAT or the paper record copies are inadequate to ensure that such records retain their integrity during the 1% manual tally and any necessary recounts, then the Secretary already has the authority to strengthen those standards and regulations as necessary. There is nothing in S.B.370 that in any way limits the authority of the Secretary to establish more stringent regulations or standards with respect to any of the attributes of the paper, ink, or toner used to print the VVPAT records so as to ensure their integrity for such purposes.

However, public testimony to the Election Assistance Commission (EAC) in June of this year from an election official using VVPAT for audits expressly indicated that despite the suggested draft standard for higher paper quality and durability, even the thermal paper his state was using maintained adequate integrity for their purposes (including use in a manual audit). He also later stated that the level of difficulty of counting the paper records was comparable to counting optical scan ballots.

Furthermore, a number of other states do not share this concern about the ability of the VVPAT records to maintain sufficient physical integrity for use in mandatory audit. Those states have enacted mandatory manual audit requirements specifying that the VVPAT be the official audit record used for their mandatory manual audits and for recounts. Most also require that in the case of a discrepancy between the electronic ballot record and the VVPAT, the VVPAT takes precedence because only it has been verified by the voter. We have attached a document which cites these manual audit provisions that have already been enacted in these other states.

Disenfranchisement could result from making AVVPAT basis for manual audit, recounts: California's existing standards for accessible voter-verifiable paper audit trails already require that the AVVPAT records produced by DREs must be accessible by voters with disabilities, as does the legislation (S.B.1438) which established California's AVVPAT requirement in statute. California's existing AVVPAT standards also already require that the AVVPAT record be used for the manual tally and recounts. S.B.370 simply requires in statute what is already required by those AVVPAT standards.

VVPAT systems deployed in California must meet the accessibility requirements specified in the existing AVVPAT standards and in S.B.1438; accordingly, voters with disabilities will not be disenfranchised.

Most DREs can't provide audio-readback of the VVPAT: Several vendors of federally-certified electronic voting systems already provide that capability, i.e., an audio playback of the printed contents of the AVVPAT, and of these, some have been federally-certified for well over a year. If California had provided timely certification of such voting systems, this technology would already be readily available for use in this state. There is still time to complete the State-level certification of such federally-certified AVVPAT voting systems so that all California voters, including those with disabilities, can verify that the paper record copy accurately records their vote.

The fact that some voting system vendors have dragged their feet in developing an accessible VVPAT system (or any VVPAT system at all) is no excuse for weakening the existing standards or failing to use the VVPAT produced by accessible VVPAT systems for those purposes for which it was clearly intended: manual audits and recounts. California's AVVPAT requirement has been in place for well over a year, and as already noted, the technology to meet that requirement exists, and several vendors providing such technology have already received federal certification and state-level certification in a number of other states.

Disabled contend privacy compromised by lack of VVPAT readback: As noted above, the needed technology exists, has been demonstrated, is federally-certified, and is already certified in a number of other states. The Secretary of State has the authority to make such technology available for use in California so that voters with disabilities are able to both vote in a private manner and verify that their vote has been accurately recorded by the VVPAT.

CACEO; insufficient time to complete audit: California jurisdictions have routinely met this requirement for several decades, and have done so by manually recounting paper ballots of various types (punch-cards, optical scan ballots, etc.), so it is not clear why jurisdictions deploying DREs with AVVPAT should not be able to comply.

In particular, various members of this Association have asserted that in DRE counties, the “paper record copies” of the electronic ballot records (printed after the polls have closed and not verified by the voters) should be used in place of the AVVPAT printouts to meet the requirements for the 1% mandatory audit, and that doing so will be more efficient.

However, it should not take any longer to count AVVPAT printouts that have been verified by the voters than it takes to count unverified paper record copies that have been printed from the unverified electronic ballot images. Either way, a manual count of same number of paper records is required.

Furthermore, it takes extra time and effort (and extra paper) to print the optional and unverified “paper record copies”, because these are printed after the polls have closed, whereas the mandated VVPAT printouts are produced at the same time the voters cast their votes. It defies logic for such election officials to assert that they will save time by printing these unverified “paper record copies” (in addition to the mandated VVPATs) or save costs by using the extra paper required to print those copies.

Paper jams: Paper jams on election day result in spoiled ballots, and spoiled ballots routinely occur with all other types of paper-based voting systems; those other voting systems are able to cope with such ballot spoilage in terms of the 1% manual audit. If proper "ballot spoiling" procedures are followed in the polling place, such spoiled ballots should not result in any discrepancy between the electronic and manual counts, because the spoiled ballots will not be counted in either the electronic or paper tallies.

Furthermore, while a small number of paper jams did occur during Nevada’s use of their VVPAT system last year, these did not interfere with successful completion of that state’s manual audit; as reported in direct testimony by an election official to the EAC this June, there were no discrepancies -- “they always matched.” Such a finding would not be possible if such malfunctions resulted in the loss of a voter-verified paper record.

And in California’s own recent mock election testing of a VVPAT system where printer jams occurred, those jammed printers, while inconvenient from the standpoint of a smooth-running election, did not result in the loss of the VVPAT record. (Such jams were cited as one of the shortcomings that rendered that system uncertifiable in the state at this time. Maintaining high standards in state certification can minimize the frequency with which such problems occur in the DRE counties, and should further reduce concerns over the possible damage to VVPAT records.)

Under this bill, these malfunctions would result in a voter being disenfranchised. This assertion is unsubstantiated. If the paper record copy is spoiled, both it and the electronic copy are voided, and the voter is given the opportunity to cast a fresh ballot; that is already required by California's existing AVVPAT standard. Thus, there is no disenfranchisement in the case of such a spoiled AVVPAT printout.

Parallel Monitoring: We believe that parallel monitoring, like logic and accuracy testing, provides a useful method for detecting various types of voting system malfunctions that are the result of either unintentional software errors, hardware malfunctions, or deliberate tampering. We strongly encourage the Secretary of State to continue this testing program.

However, neither logic and accuracy testing nor parallel monitoring are sufficient to detect all types of malfunctions or tampering, nor do they provide a means of recovery in the case where a malfunction or tampering is discovered.

For example, parallel monitoring on election day would not have discovered the type of DRE voting system malfunction as occurred in Carteret County, North Carolina in the November 2004 election. In that incident, over 4,000 valid votes were irretrievably lost by a DRE voting system.

In contrast, an accessible voter-verifiable paper audit trail not only provides a means of detecting a wider range of malfunctions or tampering, it also provides a means of recovering from them, provided that such AVVPAT printouts can be used in audits or recounts. Had an accessible VVPAT system been in place in Carteret County, none of those 4,000+ votes would have been lost, because they could have been recovered from the voter-verified paper audit trail records.

Furthermore, parallel monitoring is typically conducted on only a small number of machines (usually representing much less than 1% of the machines deployed in each county) and a small number of DRE counties. It does not provide the same level of statistical sampling as provided by the 1% mandatory audit. For example, in a county such as San Diego, if parallel monitoring were to be performed on 1% of the machines in use, approximately 100 machines would need to be tested, rather than the small handful of machines that have been tested in each county during the parallel monitoring tests conducted in California elections to date.

In addition, in the case where parallel monitoring determines that DREs were not correctly recording voter's votes in the electronic ballot records, the only viable recovery would be to use the AVVPAT records (which are voter-verified) instead. If so, then it is equally appropriate to treat the AVVPAT as the ballot of record for the 1% audit and for any recounts.

For all these reasons, parallel monitoring should be viewed as an adjunct to, and not a replacement for, the use of the AVVPAT as the official audit record used for the 1% manual audit.

CONCLUSION

To require DRE voting systems to provide an accessible voter-verifiable paper **audit trail** record (as California does) and to then preclude its use for the 1% mandatory manual audit, or for recounts, is tantamount to "bait and switch". It is particularly deceptive to call such records an "audit trail" if they are not used to conduct the 1% manual audit.

One cannot perform a meaningful independent audit of any system, including DRE voting machines, simply by making a carbon-copy of the original, unverified record that is the subject of the audit.

For example, you cannot audit a tax return simply by making a Xerox copy of a completed 1040-form and comparing the copy to the original. Similarly, one cannot meaningfully audit the non-voter-verified electronic ballot records stored in DREs by comparing them to a paper printout of that very same unverified record.

Using non-voter-verified "paper record copies" of the election ballot records (printed after the

polls have closed) to conduct the 1% audit in DRE counties, as some county election officials have proposed, renders that audit meaningless and makes the VVPAT record nothing more than a placebo.

Finally, it should be noted in non-DRE counties (e.g., counties using optical scan ballots), voters are entitled to the legal protections afforded by meaningful audits and recounts of their ballots. In those counties, manual audits of those optical scan paper ballots (which are inherently voter-verified) provide a truly independent and meaningful audit of the automated vote tabulations conducted by those counties.

Thus, if voters in such non-DRE counties are afforded the protections provided by meaningful audits and recounts, and voters in DRE counties are not, that raises significant concerns regarding equal protection violations. Such concerns have already resulted in pending lawsuits in several states using DRE voting systems that currently fail to provide a VVPAT that can be used to conduct meaningful audits or recounts. Passage of S.B.370 would ensure that voters in all of California's counties enjoy equal protection in terms of meaningful audits and recounts.

Accordingly, VerifiedVoting.org urges you to seriously consider the points we have raised in this letter and to have your office issue an updated "Bill Analysis" for S.B.370.

Once again, we strongly encourage you to support both S.B.370 and California's existing AVVPAT standards and also to encourage the timely certification in California of those federally-certified voting systems that provide an AVVPAT. Doing so will ensure that all California voters, including voters with disabilities, can verify that their votes have been accurately recorded.

Respectfully,

William Doherty
Executive Director
VerifiedVoting.org

attachments:

- (1) Text of S.B.370
- (2) Bill Analysis of S.B.370 by Legislative Affairs Unit
- (3) Citations of mandatory manual audit requirements from several states

Text of SB 370 (As Amended 6/27/2005)

SECTION 1. Section 15627 of the Elections Code is amended to read:

15627.

(a) If in the election which is to be recounted the votes were recorded by means of a punchcard voting system or by electronic or electromechanical vote tabulating devices, the voter who files the declaration requesting the recount may select whether the recount shall be conducted manually, or by means of the voting system used originally, or both.

(b) For purposes of direct recording electronic voting systems, "conducted manually" means that either the paper record copies or the voter verified paper audit trail of the electronically recorded vote are counted manually, as selected by the voter who requests the recount.

SEC. 2. Section 19253 is added to the Elections Code, to read:

19253.

(a) On a direct recording electronic voting system, the electronic record of each vote shall be considered the official record of the vote, except as provided in subdivision (b).

(b) (1) The voter verified paper audit trail shall be considered the official paper audit record and shall be used for the required 1-percent manual tally described in Section 15360 and any full recount.

(2) The voter verified paper audit trail shall govern if there is any difference between it and the electronic record during a 1-percent manual tally or full recount.

SEC 3.

If the Commission on State Mandates determines that this act contains costs mandated by the State, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.