Should we question optical scanners in the light of recent news about grading errors with the Scholastic Aptitude Tests?

Recent news about thousands of scoring errors in the grading of Scholastic Aptitude Tests (SATs) has been seized upon by opponents of the paper ballot-optical scan voting system (PBOS). They circulate these reports as a “red herring” that aims to deflect attention from the many hundreds of errors that are being reported from election districts that have implemented direct recording electronic voting machines (DREs).¹

Standardized educational testing for decades has relied upon “mark sense” optical scan technology in which photosensors read marks on carefully calibrated answer sheets. This technology is not the source of the problems being faced by the Educational Testing Service. These problems have been caused by a degradation of quality control at testing companies that are facing an unprecedented increase in business. A member of the advisory committee of the College Board said, “…the industry is stretched pretty thin…the quality-control issues need to be looked at again.”² For example, some of the problems were caused by storing paper so that it absorbed too much moisture.³

Administrators of our new voting system, of course, will need to implement whatever practices are necessary to maintain accuracy. At the same time, we should keep in mind that maintenance of equipment for grading answer sheets that each student spends almost four hours completing is much more demanding than managing the precinct-based ballot scanners that read many fewer marks for only two or three elections a year. The scanners used for SATs are much larger than those used for precinct-based ballot counting. They work at high speed to process stacks of exam sheets, rather than individual ballots. This makes them much more sensitive to variations in paper quality and scan marks.

One concern expressed by students and parents about the grading of tests was that it lacks a “fail safe” to alert the testers of inaccuracies. Ways of checking on our elections, however, are already required by NY legislation that calls for a voter verification process as well as 3% random audits. In addition, in the PBOS system, the hand-marked paper ballots are retained in the locked ballot box after counting, providing the ultimate “fail safe” that is lacking when votes are recorded electronically. Voting poses unique problems for electronic technology, since the identity of the voter must be kept secret. An electronic “fail safe” could more easily be invented for testing, where a record of the student’s identity is preserved. With elections a direct paper record is necessary for real verification.

Scanners have been used to count ballots in elections in the USA for 20 years with very few problems and with low maintenance costs.⁴ This should be remembered in 2006, when the rush to implement HAVA is apt to create havoc with all voting systems.

⁴ For a recent study, see http://www.nyvv.org/doc/NCcostcomp.pdf