



Election Technology:

Less is More

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My History

South Carolina uses ES&S iVotronics statewide (until right now)

South Carolina declares all the data to be public record

I have analyzed all the SC biennial election data since 2010, as well as some from CO, KS, PA, TX

There is such a thing as "too much technology"



Less is More

Election Day is going to be chaos

It has to work—and to be perceived to work

Pollworkers are volunteers and don't do it every day

Elections need the simplest possible solution: "I want to build everything as simple as possible, because everything is complicated." (Dan Slotnick)

I can't say I have ever seen fraud or intentional error.

I have seen many, many instances of errors either in the ES&S software or in the use of the system.



Hand Marked Paper

The check-in time is the only bottleneck

Optical scanners at the precinct: voters know how to fill in bubbles, they know their ballot can be scanned, and fraud is much harder

Voting booths are not expensive (\$200 each?) and expanding capacity for private voting is easy

Scanners are quite fast and scanning errors quite rare



Ballot Marking Devices (BMDs)

In addition to the scanners one needs lots of BMDs

Cost more than doubles, and includes ongoing maintenance, warehousing, transportation

Greatly adds to the complexity of the process:
inserting the paper, choosing the ballot style,
removing the paper, then scanning

Using DREs or BMDs does help create long lines

With barcodes, the voter cannot verify the vote



Richland County SC for Comparison

250,000 registered voters, 149 precincts

170 scanners (at \$5500 each = \$935,000)

1100 voting booths (at \$200 each = \$220,000)

THE ADDITIONAL COST FOR BMDs IS

1101 BMDs (at \$3518 each = \$3,873,318)

Maintenance about \$110,000 per year

(And expanding capacity means buying more)



Barcodes

Most BMDs produce a paper output with barcodes for tallying and text for review

Very few voters check the text

Election officials can check after the fact that barcodes match up with the text, but voters can't, so these are not voter verifiable

Some BMDs can continue to print on the paper after the voter casts the vote



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