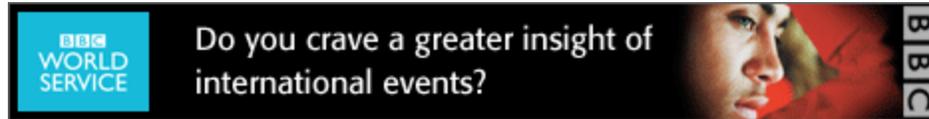


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FROM THE DESK OF DAVID POGUE

# Has the Time Come for Touchscreen Voting?

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**O**n Sunday, "CBS Sunday Morning" will air my report on touchscreen voting machines, which 50 million Americans will use in November's election. The main characters include Avi Rubin (the Johns Hopkins professor who analyzed the software in Diebold machines and found it disturbingly insecure); Rush Holt (the Congressman who's proposed a bill that requires a printed paper trail); Kevin Shelley (the California Secretary of State who banned or decertified e-voting machines statewide); and representatives of Diebold and Sequoia (the number 1 and 2 voting-machine makers).

These machines are polarizing, hot-button gadgets. One side calls them a security and reliability nightmare, and predicts that this fall, we'll see chaos and uncertainty that make the 2000 hanging-chad episode look like a warm-up act.

The other side points out that the touchscreen machines are multilingual; they can be used unassisted by the blind and illiterate (thanks to headphones); they have a 0.0 percent overvote rate (voting for more than one candidate by accident, which gets your ballot thrown out); and older voters love them (because on most systems, you can increase the type size). This side insists that the worrywarts are ignoring the checks, balances and tests carried out by each state before the machines are used.

The truth, I believe, lies somewhere in between.

In the next couple of e-columns, I'd like to share with you some of the most interesting interview bits. But this week, here are some common accusations flung by partisans on each side of the argument-and my assessment of their validity.

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1. "How can we trust these things if the public can't inspect the software inside?" Open-source voting software (available for inspection by programmers all over the world) would certainly ensure that the voting-machine companies haven't rigged an election, which is one of the most common fears.

But this approach has risks, too. For example, it takes months for a certain software version to make it through state and federal testing and certification. What would happen if someone raised a question about the software a week before the election? Chaos, that's what.

The smart states, like Maryland and now California, insist on getting a copy of the machines' source code as part of their purchase deal. They can (and do) inspect the code, and they hold a copy in escrow in case anything suspicious happens. Unfortunately, not all states added this to their contracts. Even so, these machines are tested far more often than, for example, the Johns Hopkins security report would lead you to believe. I've posted Maryland's list of inspections, for example, here (<http://www.davidpogue.com/vote.html>). Given the number of checks and spot-tests, not to mention the scrutiny of polling-place workers,

I imagine that evildoers would have a pretty difficult time hacking an election.

2. "That doesn't matter. A determined hacker could still find a way to tamper."

That's true. No e-voting machine offers CIA-level security.

But the voting-machine makers insist that that's the wrong comparison. We should be comparing voting-machine security with the alternative: paper ballots. (For example, do you know how they tally the results on a lever-operated voting machine? Someone opens the back panel and copies down the total onto a piece of paper. Talk about an insecure transaction!)

3. "How can we trust the voting-machine companies?"

You can't, really. The tales of conflict-of-interest and contributions to political parties are appalling. (Visit [www.blackboxvoting.org](http://www.blackboxvoting.org) for a complete, if a bit overheated, list of alleged violations of propriety.)

Fortunately, there's a simple way to prove that nothing sneaky is going on (read on).

4. "A voter-verified paper trail would solve everything."

I'm less worried about the trustworthiness of these machines than I was when I first wrote about Diebold in November. But a voting machine is still a mysterious box, the public still isn't allowed to inspect the software, and voters are still worried.

Even if those fears turn out to be overblown, perception is everything-and a voter-verified paper trail is a killer form of reassurance. ("Voter-verified" means that, before touching the Cast Ballot button, you get to see a paper printout of your vote, under glass. Later, officials have a way to perform a manual recount if necessary.)

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Unfortunately, experts on both sides say that there's virtually no chance of getting the printer attachments manufactured, federally approved, installed, tested and certified in time for November's election.

The bottom line: By 2006, every state that wants printers will have them. But this fall, only Nevada will have paper-trail voting machines statewide.

5. "You don't need a paper trail. Our machines already print a report at the end of the day."

I keep hearing about this from the manufacturers, but it's a worthless record; it's just a copy of the electronic tally. If the vote has somehow been compromised, the printed version does nobody any good. (That's why the voter-verified part is so important.)

6. "A paper trail will be a nightmare for election officials: paper jams, running out of ink, loading paper-forget it!"

This objection is pure myth. Sequoia offers, and Diebold soon will offer, these really cool self-contained printer modules that use thermal-printing technology (like ATM receipts)-no ink or toner. If a module runs out of paper, a worker just yanks off the entire printer module and slides on a new one, preloaded with paper. Nobody could handle the paper even if they wanted to.

6. "Yikes, what a mess! Let's just vote with a really, really big show of hands."

Don't panic. The explosion of voting-machine paranoia is a GOOD thing. It has placed these machines, their preparation and their operation, under massive scrutiny by citizens, states and the federal government. You won't be hearing any more tales of Diebold technicians casually updating voting-machine software, unsupervised, just before an election, I'll wager.

If your state will be using touchscreen machines this fall, and you're still freaked out by them, you can always vote using a paper absentee ballot. Just remember that it was paper voting that got us into trouble the last time around.

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