



Trip Report: Election Day 2006

Visit to Atlanta Georgia on 11/7/2006 for election observing

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This trip to Atlanta was suggested by Ted Selker, who knows Kathy Rogers. (Thanks Ted!)

Sunday, November 5th

Flew down to Atlanta a day early. Did a little sightseeing (e.g. Martin Luther King historic site).

Monday, November 6th

Met with Kathy Rogers and Cliff Tatum in downtown Atlanta at Kathy's office.

Kathy reports to Georgia SOS Cathy Cox; Kathy is in charge of running elections for the state. Cliff Tatum is her attorney.

We discussed the transition of Georgia from a mixed approach (punch cards, opscan, and lever machines) to Diebold electronic systems in 2002.

She talked about the process for selecting a system to be used statewide; there was a commission of about 40 people representing all the various stakeholders. I had the sense that she felt that the decision was a good one for the time, but that the lobbying in favor of VVPAT hadn't really started yet, and that they might have gone a different way today. [They are pilot testing VVPAT now; one of the sites I saw was a VVPAT pilot site.]

Georgia floated a \$40M (??) bond in 2002 to get going on this project quickly (I think that they later paid off the bond with HAVA funds). This transition was *incredibly* fast (about six months) but generally worked well.

She brought up the recent Rolling Stone article by Robert Kennedy Jr., which quotes Chris Hood (who used to work with her) on the updating of the Diebold machines in Georgia with uncertified patches, just before the November 2002 election. Apparently they were really scrambling to get the machines ready for the election, and discovered that a large number of them (I think she said as many as 20%) were suffering from "screen freezes" during the voting process. Diebold provided a patch, which there was no time to certify. They tested it themselves, and went with it. There was really no other option. The updated system was subsequently resubmitted for certification, which it received.

Kathy had suggested an itinerary for my visit, which I followed. This involved visiting Cobb County, which is a relatively affluent suburb north of Atlanta. The elections there are managed by Sharon Dunn. Cobb County is also the home of Kennesaw State University and the KSU Election Center, founded by Brit Williams and Merle King.

I next visited Sharon Dunn's office in Cobb County, and received my observer badge and a detailed proposed agenda with precincts suggested to visit the next day, together with maps. I had a brief chat with Sharon, although she was of course very busy!

Sharon said that Ray Cobb, who works at the KSU Election Center, would escort me to precincts the next day. We agree that he would pick me up at 5:30am.

On the way to my hotel (Springhill Suites Marriot) I stopped by the Marietta museum for "Gone with the Wind" and the Marietta Historical Museum. Marietta is also where the infamous civil war locomotive chase occurred (ref. Buster Keaton's "The General").

Tuesday, November 7th

Ray Cobb sprained his back slightly this morning, so Brit Williams showed up instead to escort me.

We went to our first precinct to watch setup of the Diebold machines. The basic arrangement of all but one of the precincts was 4-12 Diebold touchscreen machines for voting, and 2-3 Diebold "Express Poll" stations for registration.

The voting terminals were daisy-chained together for power. They put a night light in the plug on the last machine, so they could confirm that all machines were getting power (cute).

The Express Poll machines have flash cards containing the entire statewide registration database (about 4 million entries). They also have information as to who has already done early voting (called "advance voting" there). These cards are prepared over the previous weekend (advance voting ended on Friday), and multiple copies are made on some high-end flash-card duplicators at the KSU election center. They are then sent out rush by UPS (I think) on Monday to all of the counties.

The Express Poll machines in a precinct are connected with Ethernet to each other. They are supposed to (and generally do) stay "in synch" with each other, so they all have the updated database as voters register. However, these machines have relatively significant problems staying in synch, and poll workers having to occasionally reboot the express poll machines so they would resynch. This was perhaps the most common technology problem I saw; many precincts suffered from this.

There is no online connection for the Express Poll machines. Georgia does not allow voters to vote at other than their own precinct before 6:00 pm (polls close at 7pm), so there is no need for this. Voters who vote after 6pm at other than their own precinct vote with provisional ballots.

The Express poll machines also create the voter authorization smart cards that the voters put into the voting terminals.

I heard that in a couple of pollsites (in another county) power was lost, but that emergency generators were on hand and made available.

These are necessary of course to run the ExpressPoll stations and the voting terminals. I had also heard that they had printed copies of the registration list for the county at each pollsites, although I didn't see them.

I was not allowed to take any photos in pollsites during the 7am--7pm election day. I have a set of about 30 photos of setup, closedown, and the KSU election Center that I can share: http://www.flickr.com/photos/ron_rivest/292755285/in/set-72157594367276746/ or <http://theory.csail.mit.edu/~rivest/voting/2006-11-07-Atlanta-photos/>

A voter who is not in the registration list at all may not vote, even provisionally. I was quite troubled by this. In one precinct the poll manager was quite troubled as well, as he had about ten voters so far (this was at 10am) who were unable to vote. Most of the voters lived in Acworth, and had recently moved. In Acworth you can move around the corner, and keep the same zip code, but end up in a different county (and thus different precinct). If you don't update your voting registration, you can thus get dropped from the voting registration database when you move. I really thought these folks should have gotten a provisional ballot and/or been allowed same-day registration. But the law says that if you aren't registered you aren't allowed to vote, so there was presumably no hope for these voters to have their votes count.

The precincts visited varied considerably in character. Most were in churches. One was in a Publix grocery store, in the back (an office for "price coordinator", through a door next to the "pork" meat department (!)). The store was in operation while voting was going on. Most precincts had adequate space, although a couple (including the grocery store one) were fairly cramped.

I asked the poll managers if they had had any interesting incidents.

-- One poll manager said that one voter was asking in a "semi-humorous" way if his vote would actually be counted as he had cast it.

-- One poll manager had the following experience: A voter found she could not vote for a certain candidate; her choice would just not register. She complained, and the poll manager cancelled her session on the voting terminal. He had her voting card re-authorized, and they went to a different voting machine. Same experience!! (Same problem, with the same candidate.) He then cancelled this voting session too, and gave her a new voting card (he suspected the card somehow), and went to a third voting machine. This time she was able to vote as she wished. It is very unclear to me how this could have happened.

-- I heard that a well-known local conservative radio talk show host was not able to vote. Apparently he had changed his home address on his driver's license to his radio station, in conjunction with some promotion or other. That messed up his registration. He was raising hell

about this on the radio, until he learned that it was really his own fault... (I still think that provisional ballots ought to be used more...)

-- One voter was apparently quite concerned that the yellow voter authorization card was being programmed by the Express Poll machine to contain her name. (It does not; it only has the ballot style.)

The ballot was rather long; the average voter took about five minutes to answer all the questions and propositions. Lines were generally not too long, though; there were generally enough machines around (15-30 minute waits). They allocate machines at the rate of one voting terminal for every 125 registered voters. (Although I heard they are now a bit better than that.)

I saw no multi-precinct poll sites; I think they are nonexistent in Cobb County, and perhaps rare in Georgia.

Georgia is experimenting with VVPAT as well; three precincts had VVPAT equipment (Diebold TSx) on a pilot basis. One of these pilot precincts was in Cobb County; I went there with Sharon Dunn to see how it was going.

In the VVPAT precinct the lines were considerably longer (about 45 minutes). While we were there Sharon requested and oversaw the setup of a new voting terminal (I think the count then went to nine from eight). It wasn't clear whether the VVPAT itself was slowing voters down---I don't think so. I think they just didn't have enough machines initially for the size of the precinct. The voters didn't seem to be looking much at the paper trail. There was a demo/trial machine available for voters to play with; it was hardly used. (Voters were already familiar with the Diebold touch-screen, so the interface is basically the same if you ignore the paper trail.)

Apparently, however, many voters wanted a "receipt" to take home, and asked about this. The lesson here is never to use the word "receipt" when talking about VVPAT with voters.

Overall, the VVPAT pilot seemed to be a "successful" one, from what I could tell and the comments I heard.

I also visited the KSU Election Center. They have a rented house near Kennesaw State University campus; the KSU Foundation gives them funding (I think about \$400k/year).

The KSU Election Center manages all of the acceptance testing for delivered voting systems in Georgia. (They don't do this at the house.) They also program up the Express Poll flash cards, as noted above. They have a staff of about 6--8. They also manage the ballot preparation for most of the counties, although some do their own ballot prep, and Diebold does some.

One of the most interesting things was the "parallel monitoring" effort at the KSU election center. Upstairs in the house they had six voting machines set up for this parallel monitoring.

These machines had *not* been pulled from the precincts, but instead were machines that live at the election center, which were then loaded with the software appropriate for those six precincts. The precincts were more or less randomly chosen (except three were for precincts

where ballots were programmed by the election center, two were for precincts who did their own ballot prep, and one was for a precinct where Diebold did the ballot prep.)

The protocol worked as follows. They had printed up absentee ballots for each precinct; about 48 ballots/precinct. They then had answers written on the ballots, according to some pattern. One person would be voting on the terminal. Another would be reading from the "script" (i.e., the filled-in absentee ballots). A third person was managing the videotaping of all of this.

I was disappointed that the machines were not real voting machines pulled from the precincts.

At the end of the day, I went back to the first precinct I had visited, and watched close-down. This involved printing two copies of the "long form" paper tape output and one copy of the "short form" paper tape output for each voting machine. These were all multiply signed. The memory cards from all voting terminals were extracted, and successively inserted into one voting machine which had been put into "accumulator" mode. A couple of long paper tapes were printed out from this accumulator machine (signed too). Finally, the accumulator machine was wheeled into another office where it could be attached to a phone line so the unofficial results could be modemed back to county HQ. All of the memory cards and the paper tapes were packaged up for delivery to county HQ. All of the equipment was re-packed.

I stopped by county HQ, then, about 8:30pm and saw a number of deliveries of the cards and tapes. The tabulating room had a viewing window; there was a friendly police officer in the viewing area. I was the only one viewing. Beth Kinsin (sp?) took me a little tour of their operations there, which including many people opening absentee ballots and feeding them into counting machines, other people taking memory cards from the voting machines at county HQ which had been used for early voting, other people opening the provisional ballots and making initial categorizations of evaluation procedures to be used.

Overall, I was very impressed with quality and training of the staff involved. The whole operation was run in a very professional manner; they are clearly "on top of their game". It seemed quite evident that quality of the organization running the election is much more important the choice of technology used (although both are important). Good, well-trained people can make almost any system work well. (Nonetheless, usability or security considerations may make some systems inadvisable...) Everyone had excellent detailed instructions to follow for everything they did, and knew who to call when some exceptional situation had to be handled. (Of course, I only saw voting in this one county, and this county was one proposed to me by Kathy Rogers, so I'm sure it was one of Georgia's best-run. I don't know how things ran in other parts of Georgia.)

The number of pollworkers per site was also impressively large. A typical site had about 10-12 pollworkers, for a precinct of 1500--2500 registered voters:

- one greeter who also manages incoming line
- four on the registration desk (two per ExpressPoll station; a large precinct would have three stations and six pollworkers here)
- two pollworks on a provisional desk
- one pollworker managing the transitions between registration and the voting machines (sometimes there was a small line here)

-- one pollworker at the exit to collect the voter authorization cards and to give each voter a "I'm a Georgia Voter" lapel sticker.

-- one poll manager who oversaw everything

There was also a roving "troubleshooter" who made rounds and showed up periodically at each pollsite. There were no police officers.

I was also very impressed with their "southern hospitality"; they really extended themselves to make my visit an interesting and meaningful one. Kathy Rogers and Sharon Dunn helped organize the visit; Brit Williams and Merle King hosted many of the particular precinct visits and the visit to the KSU election center.