

An Open Letter to the Cherokee County Board of Elections

Cherokee County Citizens for Voting Integrity

Thank you for allowing us the time to comment on the voting equipment in Cherokee County. Our democracy depends on the reliability, accuracy, accessibility, and transparency of the voting systems we use to choose our representatives. It is our opinion that Cherokee County will be best served by an optical scan system paired with disabled-accessible ballot marking devices. There are several good reasons to choose optical scanners over touchscreens, even those that have a voter-verified paper trail (VVPT). These include cost, reliability, and voter confidence.

First, optical scanners are a significantly less expensive voting system than touchscreens. We base this assertion on voter registration data from the Georgia State Board of Elections and an ES&S price sheet from the North Carolina Association of County Commissioners (NCACC).¹ **This should not be construed as an endorsement of ES&S.** However, this information allows us to make an apples-to-apples comparison of actual voting systems sold this year to a nearby state. This comparison shows that Cherokee County could save \$792,170 in initial purchase costs by selecting precinct-based optical scanners combined with ballot markers. A cost projection indicates that Cherokee County will save \$802,022 over five years by selecting an optical scan-based system².

Second, optical scanners are the preferred voting system of the vast majority of independent computer scientists³. Additionally, optical scanners and ballot markers have the support of voters. The voters of Cherokee County recognize that the latest technologies are not always the best. The question we should ask ourselves is not “Is it new?” but “Will it work?” In particular, independent disabled voters in have expressed a clear preference for the AutoMARK ballot marker over the available touchscreen systems. Problems with the AutoMARK in other jurisdictions have been due to a single wire that came loose during improper handling during delivery. This problem – which is trivial to detect and fix – should not be used by opponents of election integrity as an opportunity to stall on much-needed improvements to the integrity of elections in Georgia.

Finally, we encourage Cherokee County to be part of the solution and not part of the problem. Twenty-seven states have passed election integrity reform bills that restore confidence to the voting process by combining paper-based voting systems with mandatory audits. It was Ronald Reagan who said “Trust, but verify.” While many of us trust the Secretary of State and the Boards of Elections to do their job with professionalism and honesty, as citizens we feel it is our duty to independently verify the integrity of our democracy.

You have an opportunity to move Georgia in the right direction. Please consider these facts when discussing proper voting systems with our state government.

Sincerely,

Cherokee County Citizens for Voting Integrity

¹The NCACC data provides the uniform, state-wide prices of the hardware and software purchased by that state earlier this year. Since North Carolina is of comparable size and population to Georgia, we believe our State Board would be capable of negotiating a similar deal.

²A precinct-by-precinct cost breakdown is included as an appendix to this letter

³In 2004 the Association for Computing Machinery – one of the largest and most prestigious professional organizations for computer scientists – took a public policy position that supported strong engineering standards paired with voter-verified paper ballots. It was supported by over 95% of their members. See <https://www.myacm.org/opinion/poll.cfm>

A Cherokee Cost Comparison

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Air Acres 001	1,738	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Arnold Mill 002	2,877	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Avery 003	1,774	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Ball Ground 004	1,701	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Bascomb 005	2,950	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Bells 006	2,305	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Booth 007	2,777	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Bradshaw 008	2,619	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Bridgemill 009	3,221	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Canton 010	2,618	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Carmel 011	2,344	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Cherokee South 012	2,489	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Clayton 013	1,255	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Conns Creek 014	506	1 Audio iVotronic(s) 1 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$7,690	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$-2,255
Deer Run 015	2,021	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Dixie 016	3,518	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Dupree 017	1,275	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Freehome 018	3,114	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Hickory Flat 019	1,824	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Hightower 020	1,689	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Hillside 021	2,357	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Holly Springs 022	1,590	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Kellogg 023	3,285	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Liberty 024	3,510	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Licksillet 025	1,171	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Little River 026	3,180	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Macedonia 027	1,883	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Mountain Road 028	2,165	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Oak Grove 029	2,013	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
R M Moore 030	1,926	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
R T Jones 031	1,318	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Rosecreek 032	2,817	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Salacoa 033	411	1 Audio iVotronic(s) 1 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$7,690	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	-\$2,255
Sixes 034	2,079	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Sutallee 035	1,288	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Teasley 036	3,859	1 Audio iVotronic(s) 12 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$43,935	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$33,990
Toonigh 037	3,539	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Union Hill 038	2,161	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Univeter 039	3,476	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Victoria 040	1,988	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Waleska 041	1,459	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Wildcat 042	2,275	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Woodlands 043	1,859	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Woodstock 044	2,173	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Software And Extras		1 iVotronic Supervisor Terminal 1 Software Suite (for DREs)	\$77,410	1 Software Suite (no DREs)	\$64,780	\$12,630
GRAND TOTALS	98,397	44 Audio iVotronic(s) 303 Plain iVotronic(s) 44 iVotronic Print Pack(s)	\$1,269,175	44 AutoMARK(s) 44 M100 Scanner(s)	\$502,360	\$766,815

Type of Product	Initial Costs	Support, Maintenance & Operations					Total Costs
		Year 1	Year 2	Year 3	Year 4	Year 5	
DRE	\$1,269,175	\$4,389	\$67,069	\$69,151	\$71,233	\$129,876	\$1,610,893
Optical Scan	\$502,360	\$38,965	\$74,605	\$75,529	\$76,497	\$83,757	\$851,713

B Cost Data and Assumptions

- 2005 per-precinct registration data from the Georgia SOS:
<http://www.sos.state.ga.us/elections/voter%5fregistration/county%5f%5frace%5f%5fgender.pdf>
- ES&S price sheet available at the NCACC web site:
<http://www.ncacc.org/documents/equipmentpricing-ess.pdf>

Voting Equipment and Software Licensing	
Audio-Enabled DRE	\$3,395
Standard DRE	\$3,395
AutoMARK	\$4,950
M100 Scanner	\$4,995
Support Software (with DREs)	\$74,780
Support Software (no DREs)	\$64,780

Auxillary Equipment	
iVotronic Printer Pack (one per precinct)	\$1,000
iVotronic Support Equipment	\$2,630
VVPAT Paper (one roll)	\$5.75
DRE Battery	\$163
M100 Battery	\$37
AutoMARK Battery	\$105
Hardware, counties with less than 10000 registered voters	\$3,743
Hardware, counties with less than 50000 registered voters	\$7,866
Hardware, counties with less than 100000 registered voters	\$18,064
Hardware, counties with more than 100000 registered voters	\$25,213

Maintenance Costs	
Support Software (with DREs)	\$14,100
Support Software (no DREs)	\$12,100
DRE, Year 1	\$0
DRE, Year 2	\$140
DRE, Year 3	\$146
DRE, Year 4	\$152
DRE, Year 5	\$158
AutoMARK, Year 1	\$0
AutoMARK, Year 2	\$310
AutoMARK, Year 3	\$322
AutoMARK, Year 4	\$335
AutoMARK, Year 5	\$348
M100, Year 1	\$0
M100, Year 2	\$225
M100, Year 3	\$234
M100, Year 4	\$243
M100, Year 5	\$253

Other Assumptions	
Elections per year	2
Year at which all batteries need replacing	5
Maximum turnout	70%
Voters who vote on election day (not early or absentee)	70% of turnout
Percent of extra paper ballots/rolls printed/purchased	10%
Registered voters per DRE	300
Registered voters per scanner	5000
Average cost, optical scan ballot (based on Durham County data, 2002 – 2004)	\$0.18