

Cost Savings for the Taxpayers.

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1 Summary

In this document I provide a comparison of 2003-2004 cost data for eight counties in Florida showing that real operating costs per voter are less for counties using Precinct Count Optical Scan units made by ES&S versus those using ES&S iVotronic systems. As the table below indicates, using real per-voter costs, Allegheny County would save \$0.79 per voter or \$693,619.21 annually if it chose Optical Scan units.

System	Average Cost Per Voter	# Voters	Estimated Costs
ES&S iVotronic	\$12.70	877,999	\$11,150,587.30
ES&S OpScan+Automark	\$11.91	877,999	\$10,456,968.09
Savings	\$0.79		\$693,619.21

The iVotronic is not auditable, it is not accessible, it is not safe, and it will cost more, it is a bad, bad choice.

2 Intro

In 2004 Dr. Rosemarie Myerson and Richard Myerson conducted a survey of counties in Florida using touchscreen voting systems and precinct count optical scan systems. In their report they collected actual elections cost data from counties using both methods. For touchscreen counties the reported costs included all system maintenance as well as consumable supplies. For optical scan counties costs included system maintenance, consumable supplies, and paper ballot costs. Their findings are reported in an attached document.

On the evening of the 6th I reexamined their data to identify real cost differences between the ES&S iVotronic systems being proposed for use by County Executive Dan Onorato, and comparable systems the ES&S Optech Eagle or M100 Optical Scanners. The two scanners are comparable equipment with the M100 being a newer version of the Eagle. The exact make and model of system used is not referenced in the Myerson report. I obtained this information from the Florida Department of State.

Four points bear mentioning:

1. Both are certified for use in Pennsylvania.
2. The Optical Scan system provides an auditable paper backup while the iVotronic does not.
3. The Optical Scan systems, with the ES&S Automark Ballot Marker are certified to the 2005 HAVA accessibility standards while the iVotronic is not.
4. In past elections the Optical Scan systems have reported lower error rates than the iVotronic.

Clearly the Optical Scan systems are the better choice. In this report I will also show that when real costs are taken into account, they are the cheaper choice as well.

3 Optical Scan Counties

The following provides a summary of the Optical Scan Counties used in this report.

County	System	Avg. # voters	Avg. Expenditures	Avg. /1,000 Vtrs
Gulf	M100	9,355.5	199,438	21,317.72
Highlands	M100	59,247	481,838.5	8,132.70
Bay	M100	93,799	817,695	8,717.52
Clay	Eagle	96,408	1,152,972.5	11,959.30
St John	Eagle	101,815.5	1,041,702	10,231.27
Marion	M100	175,683	1,308,218.5	7,446.47
Escambia	Eagle	176,817	1,740,156.5	9,841.56
Orange	Eagle	432,945	5,692,856	13,149.14
			Scan Avg	11,349.46

As you can see the average cost per 1000 voters is \$11,349.46. Dividing this by 1,000 we get \$11.35.

3.1 Purchasing

In this subsection I compute the likely purchase costs of optical scan systems. In order to determine the likely purchase cost of these systems I have calculated the cost of 1,314 M100 Precinct-Count optical Scanners based upon Sequoia's RFP response to North Carolina. The quoted price for those systems was \$4,995 each.

In order to satisfy HAVA we must purchase one accessible system per precinct. The iVotronic does not meet federal requirements for Accessibility under the EAC standards. In order to meet the standards under HAVA with Optical Scan units we will need to purchase one additional Ballot Marker per precinct.

These were not used in Florida during the 2003-2004 elections. Therefore I will estimate the costs in order to calculate the appropriate offset.

To this end I calculated the expected purchase prices and annual costs for 1,314 ES&S Automark systems. Prices are based upon the same purchasing breakdown provided to North Carolina that I referenced above. In this case the proposed costs were \$4,950 each.

System	Individual Cost	# Required	Total
M100 Optical Scanner	\$4,995.00	1,314	\$6,563,400.00
Automark Ballot Marker	\$4,950.00	1,314	\$6,504,300.00
Total Costs			\$13,067,730

3.2 Annual Costs

At the time that this data was compiled the Florida Counties in Question were not using the Automark or any other additional system for disability access. I have therefore factored the estimated cost per voter of the Automark. This estimation is based upon ES&S's RFP response for North Carolina. It factors in the estimated cost of maintenance as well as 'Consumables', in this case ink cartridges and ear covers, that are expected to need annual replacement.

Maintenance	Consumables	# of Systems	Total	# Voters	Per-voter cost
\$328.75	\$45.00	1,314	\$491,107.50	877,999	\$0.56

This means that the expected cost per-voter of a HAVA Compliant Optical Scan system in Allegheny County is:

System	Average Cost Per Voter	# Voters	Estimated Costs
ES&S Automark	\$0.56	877,999	\$491,679.44
ES&S OpScan	\$11.35	877,999	\$9,965,288.65
Totals	\$11.91		\$10,456,968.09

4 iVotronic Counties

The following table lists counties using the iVotronic system.

County	System	Avg. # voters	Avg. Expenditures	Avg./1,000 Vtrs
Sumter	iVotronic	380,225	947,369.5	24,916.02
Charlotte	iVotronic	108,821	1,251,018.5	11,496.11
Lake	iVotronic	148,944.5	1,147,552	7,704.56
Sarasota	iVotronic	233,004.5	2,929,420	12,572.37
Lee	iVotronic	291,948	3,440,887	11,785.95
Pinellas	iVotronic	572,858	5,129,234	8,953.76
Miami-Dade	iVotronic	968,295.5	15,040,000	15,532.44
Broward	iVotronic	979,747	8,423,191.5	8,597.31
iVotronic Avg				12,694.81

5 Voter Totals

Allegheny County is home to 877,999 registered voters.

Using the actual cost per voter from Florida and the estimated costs per voter from North Carolina we get:

System	Average Cost Per Voter	# Voters	Estimated Costs
ES&S iVotronic	\$12.70	877,999	\$11,150,587.30
ES&S OpScan+Automark	\$11.91	877,999	\$10,456,968.09
Savings	\$0.79		\$693,619.21

As the table below shows using real per-voter costs Allegheny County would save \$0.79 per voter or \$693,619.21 annually if it chose Optical Scan units. There is no good reason to choose the iVotronic machines. They are not auditable, they are not accessible, they are not safe, they cost more: they are a bad choice.