

The printing of ballots suitable for use in paper ballot/optical scan systems is an exacting task. Ballot printing may be done by companies that supply optical scan equipment or by printing companies that can meet the specifications set by equipment manufacturers.

Printing may be done by the offset process or, more recently, by direct digital printing using, for example, laser printers. Optical scan equipment vendors can train printing companies to produce acceptable ballots. There are over 250 printing companies in the US that supply ballots.

### **Paper Ballot Printing**

Optical scan paper ballots are generally slightly thicker than "20 pound bond" copy paper typically used in office printers and copiers. The ES&S system uses 80 pounds "text" paper, which is approximately equivalent to 31 pound "bond" paper. So ballot paper for optical scan is about 50% thicker than normal copy paper.

The ballot paper is cut and marked precisely. ES&S supplies specially marked paper to printers at a cost of about  $8\phi$  to  $10\phi$  per sheet. Acceptable paper can also be obtained from many other sources, such as paper specialty companies.

Ballots have registration marks to determine the ballot location in the scanner. There can also be special marks or ink for security purposes. Ballots may be folded as long as the folds are not on the registration marks. Folded ballots can thus be mailed to and from absentee voters.

Ballots may be printed by offset, which uses a master, making this a more expensive alternative. Digital printing, using laser printers and similar technology, and ubiquitous in modern print shops, does not use a master and is simpler and cheaper.

Each election district may have different contests, and the ballots must be different. The optical scan vendors have special software that they use themselves, or supply to qualified printers, which keeps track of multiple races. The software also ensures that the optical scanners recognize different races and can tally them correctly.

## Paper Ballot Printing Costs in Other States

New Yorkers for Verified Voting is conducting a survey of states and counties nationwide that have been using precinct based optical scan systems. One of the survey questions is the cost of printing optical scan ballots. It is interesting to note that relatively few Boards of Elections officials we interviewed actually know the price of printing ballots. Usually this is because the budgetary authority for printing ballots lies with local authorities rather than the BOE officials we spoke with. But this also implies that ballot printing costs are not problematic for these states – one would assume these officials would know the print costs quite exactly if their counties were in an uproar about the cost of optical scan ballots.

Here are optical scan ballot printing costs we received from two states:

Okalahoma — 10¢ per ballot

Minnesota —  $14\phi$  to  $17\phi$  per ballot

### Paper Ballots Costs for New York State

We have discussed the production and costs of paper ballots with personnel from ES&S, and Dayton Legal Blank of Dayton, OH, a large quantity printer of ballots. *The consensus is that straightforward black and white ballots, printed digitally, will cost less than 30¢ per ballot.* The following page shows a quotation from Dayton Legal Blank to supply optical scan ballots for Schenectady County at 29¢ each, not including shipping and taxes.

However, with a competitive bidding process, there is good reason to believe that New York could pay far less than that. *A competitive bidding process will guarantee lower per ballot prices*. New York State has over 11 million registered voters. If the state were to designate and certify a number of printers around the state to print optical scan ballots, the quantities of scale for New York's 11 million voters would ensure that the ballot costs are indeed low.

If Okalahoma can print ballots for 10¢ each, surely New York, with 11 million voters, can negotiate the same.

# dlb

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Dayton Legal Blank Inc.

P.O. Box 750788 Dayton, Ohio 45475-0788

## QUOTATION

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Date:04/28/2005To:Bill EdelsteinCustomer Name:New Yorker's for Verified Voting

Quantity	Description	Unit Price	Total
103,000	Optical Scan ballots for Schenectady,County, NY.	\$0.2900 per 1	\$29869.99
	1	Subtotal	\$29869.99
		Estimated Freight	\$800.00
		Total	\$30669.99

Shipping charges are not included.

The above pricing should be used for budgetory purposes only.

Prices could vary greately based on the actual election specifications.

<sup>By:</sup> Dave Keeler

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