

Cost-per-Print of four test documents

° **Determine Ink Cartridge Yields – the average number of prints-per-cartridge for each cartridge**

- Test files printed semi-continuously, HP-supplied and *SpencerLab* Printer Test Suite
 - Black Text, *Dignissimas2*
 - Mixed Text & Graphics, *Erolm Msupi*
 - News Letter, *SpencerLab LC Newsletter*
 - PowerPoint Slide, *SpencerLab Boise 5a*
- Cartridges judged to be at “end-of-life” at the earlier of an ‘Ink Out’ signal on the control panel or when test prints show visible defects attributable to ink supply
 - HP BIJ 1000: ‘Ink Out’ signal provided on printer control panel
 - Canon PIXMA iP4000: ‘Ink Out’ signal provided on printer control panel (BJ Status Monitor)
- Test high-capacity OEM inks, where available
 - HP #10 Black and #11 individual C, M, Y cartridges
 - Canon inks only one size available
- Testing is repeated over multiple cartridges to assure consistency

° **Calculate ink component cost-per-print**

- Divide each cartridge cost by the corresponding cartridge yield (average prints-per-cartridge)

° **Calculate other user-replaceable component pro-rata costs**

- *HP BIJ 1000* contains user-replaceable printheads; therefore, include printhead cost in total Cost-per-Print
- Although the *Canon PIXMA iP4000* printhead can be replaced, it does not have a scheduled life nor should it be replaced under typical usage; therefore, do not include in total Cost-per-Print

° **Sum these component costs to obtain total Cost-per-Print for the test document**



° *Print Modes: default on Plain paper*

° *Test Document Coverage Estimates*

- *Ink Coverage: the sum of the parts of the total page covered by each primary – Cyan, Magenta, Yellow, Black*
 - *Ink coverage varies considerably with each individual printer and mode – SWOP coverage is indicated for reference*
- *Page Coverage: the part of the total page covered by any color (color can include multiple primaries)*

SWOP Coverages	Page	cyan	magenta	yellow	black	Ink
<i>Black Text</i>	4.1%				4.1%	4.1%
<i>Mixed Text & Graphics</i>	9.6%	3.3%	2.4%	0.3%	8.3%	14.3%
<i>News Letter</i>	12.3%	4.5%	4.1%	2.9%	9.8%	21.3%
<i>PowerPoint Slide</i>	14.1%	10.1%	10.5%	7.7%	3.9%	32.2%

° *Cartridge and Printhead Prices*

Component Costs		cyan	magenta	yellow	Pigment black	Dye black
<i>HP BIJ 1000</i>	<i>Ink</i>	\$33.99	\$33.99	\$33.99	\$33.99	
	<i>Printhead</i>	\$33.99	\$33.99	\$33.99	\$33.99	
<i>Canon PIXMA iP4000</i>		\$11.95	\$11.95	\$11.95	\$13.95	\$11.95

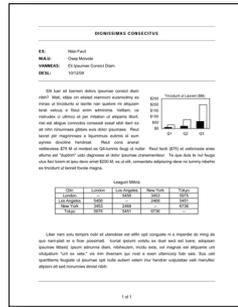
US\$ E-Commerce prices as of 5/12/05 per manufacturer's website

• Independent testing by *SpencerLab* Digital Color Laboratory was sponsored by Hewlett-Packard Company

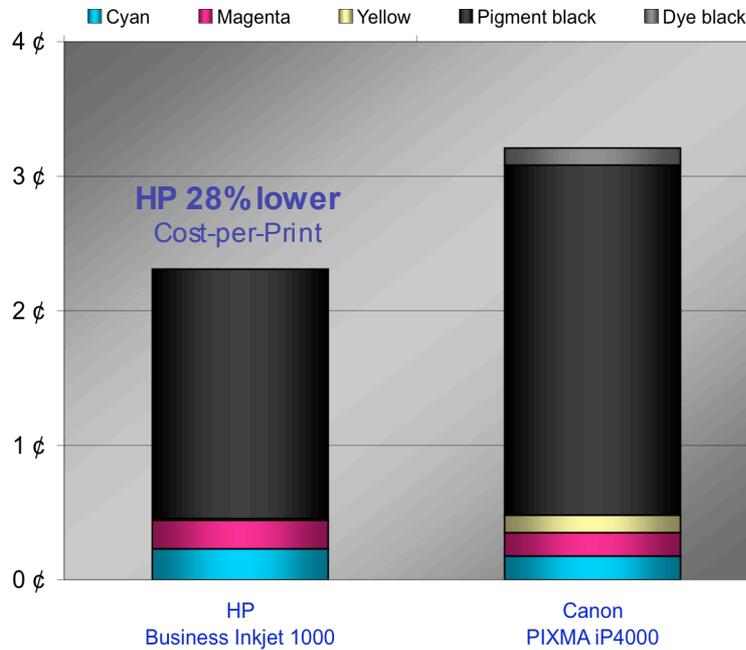


Cost-per-Print: *U.S. cents* – HP Business Inkjet 1000 vs. Canon PIXMA iP4000

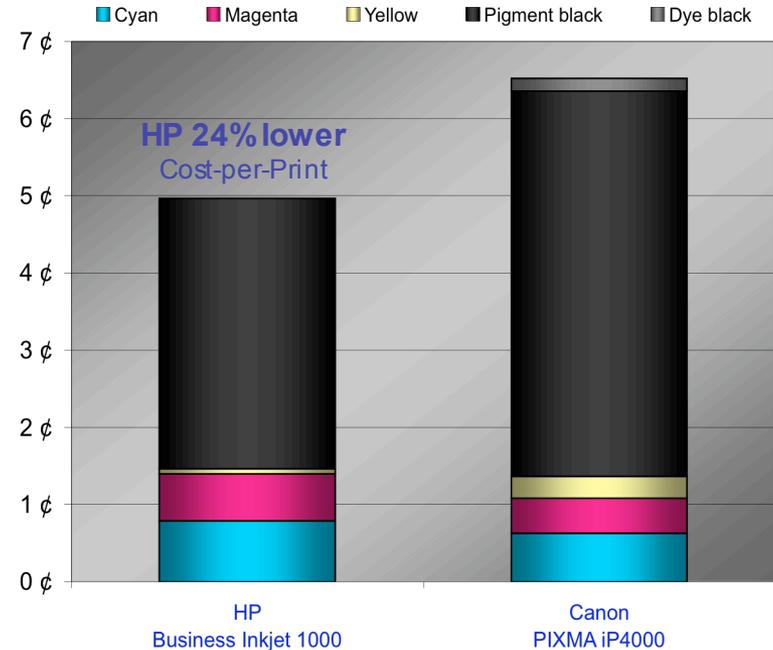
spencerLAB
COST-PER-PRINT TESTED



BLACK TEXT



MIXED TEXT & GRAPHICS



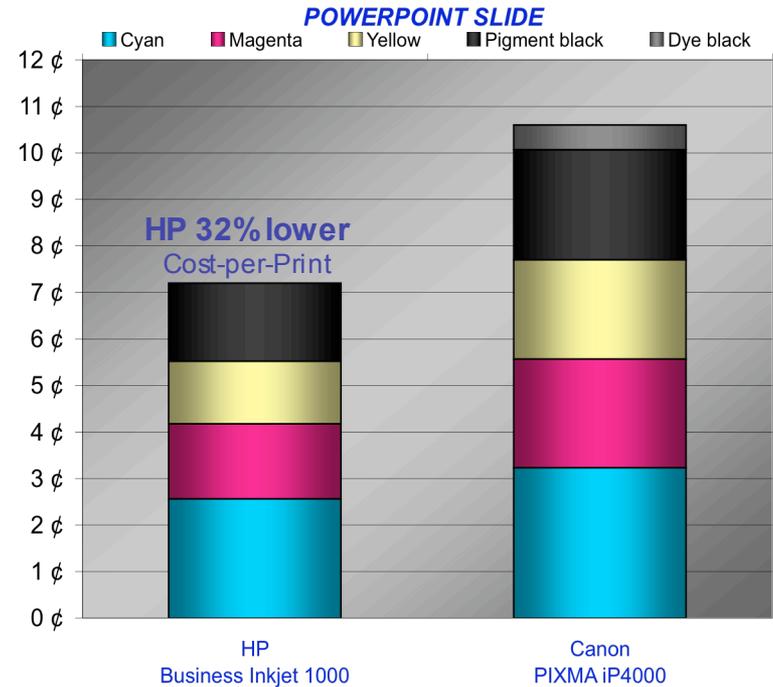
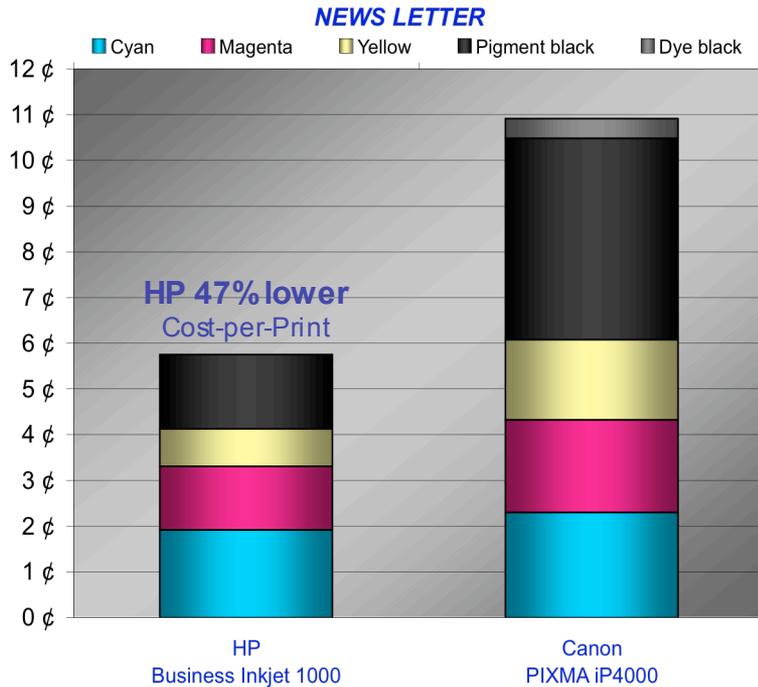
Cost-per-Print includes Ink costs only.

E-Commerce Pricing per manufacturer's website, 5/12/05.
All testing performed using default driver settings.



Cost-per-Print: U.S. cents – HP Business Inkjet 1000 vs. Canon PIXMA iP4000

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COST-PER-PRINT TESTED



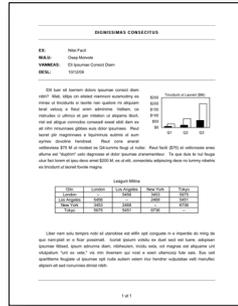
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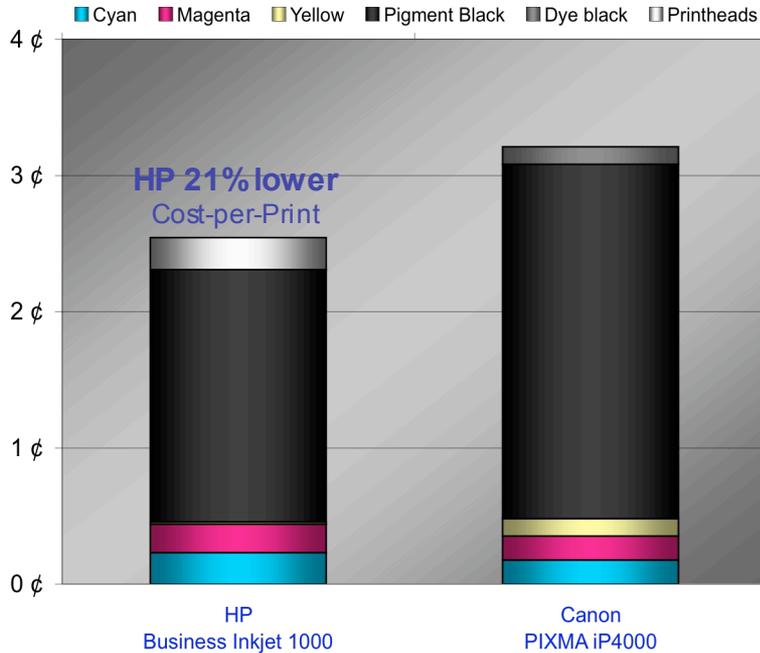


Cost-per-Print: *U.S. cents* – HP Business Inkjet 1000 vs. Canon PIXMA iP4000

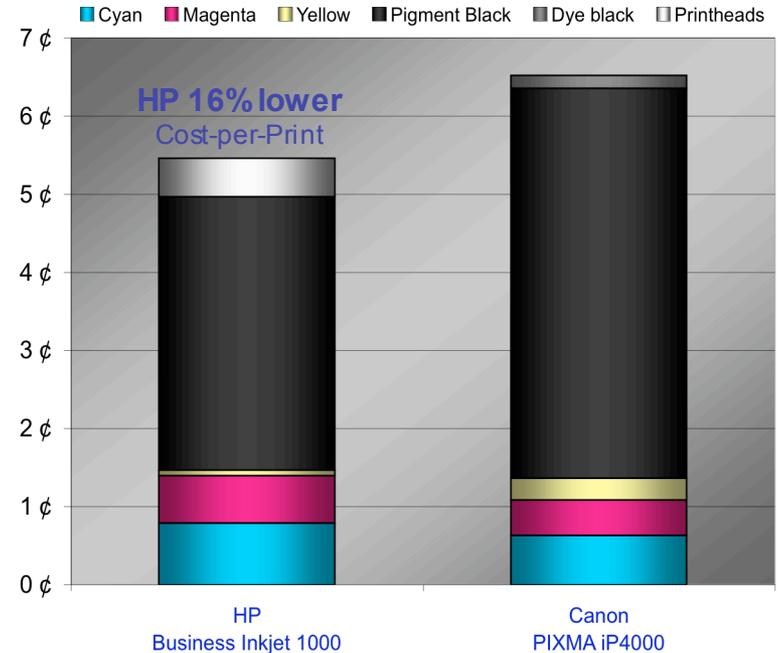
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COST-PER-PRINT TESTED



BLACK TEXT



MIXED TEXT & GRAPHICS



Cost-per-Print includes Ink and HP printhead costs.

E-Commerce Pricing per manufacturer's website, 5/12/05.
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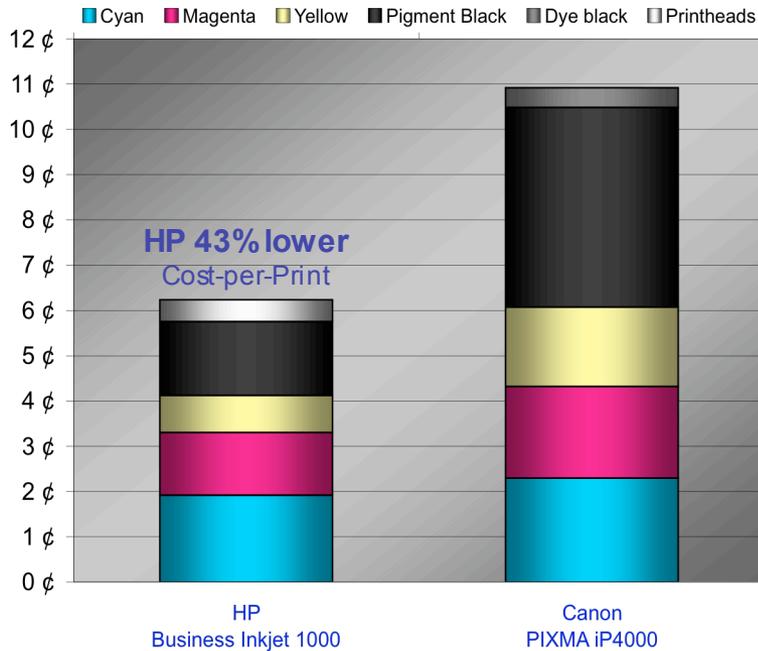


Cost-per-Print: U.S. cents – HP Business Inkjet 1000 vs. Canon PIXMA iP4000

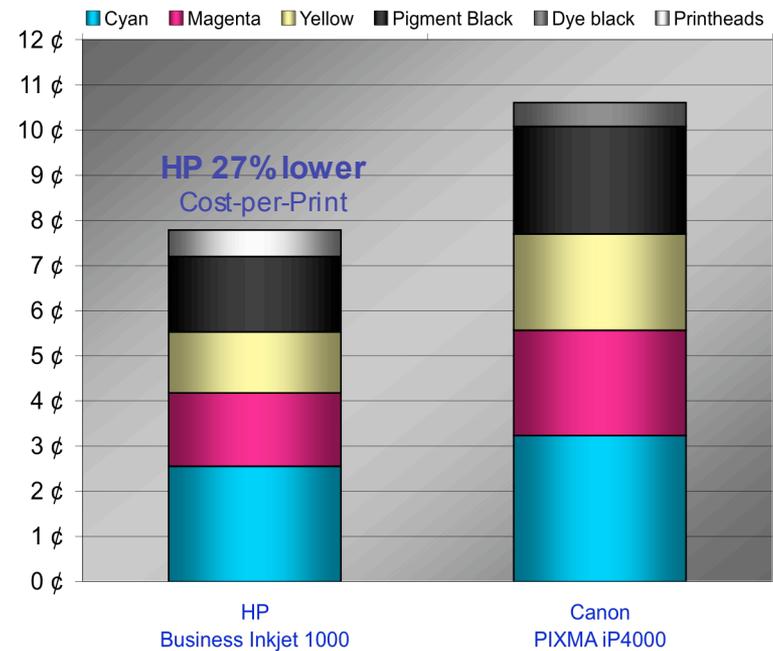
spencerLAB
COST-PER-PRINT TESTED



NEWS LETTER



POWERPOINT SLIDE



Cost-per-Print includes Ink and HP printhead costs.

E-Commerce Pricing per manufacturer's website, 5/12/05.
All testing performed using default driver settings.

