

# Inkjet, laser, Memjet? Fast color printers on tap

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The Memjet office printer is pictured during the Consumer Electronics Show, Friday, Jan. 7, 2011, in Las Vegas. (AP Photo/Isaac Brekken)

(AP) -- For a long time, the two choices in desktop printers have been inkjet and laser. This year, a significant twist on the inkjet is hitting the market and promises high speed - think one color page per second - at relatively low cost.

The company behind the new technology, Memjet, hopes to snag a significant share of the \$250 billion-per-year worldwide printing market.

"We're bringing revolutionary change to the industry," said Len Lauer, Memjet's CEO.

Memjet can be several times faster than a regular inkjet because instead

of having a small print head that sweeps across the page, over and over, Memjet's head is as wide as the page and doesn't move. As the paper travels underneath it, 70,000 microscopic nozzles spurt ink all at the same time.

High-end laser printers can match Memjet's speed but they cost more, both to buy and to use. Lauer expects Memjet-equipped printers to hit the market this year for \$500 to \$600. The ink will cost about 5 cents per page, compared with 12 cents to 25 cents per page for laser toner or consumer inkjet ink.

The page-wide heads and tiny nozzles are made possible by advances in micro-electro-mechanical systems, or MEMS. These are parts made out of silicon using many of the same techniques that go into making computer chips, so manufacturers can create tiny and very precise mechanical assemblies. MEMS are also used in digital cinema projectors and in the sensors that capture the motion of the Nintendo Wii's remotes and such smart phones as the iPhone. Other companies have demonstrated wide inkjet heads, but Memjet appears to be the first to make it a finished desktop product.

The inventor of the Memjet head is Kia Silverbrook, an Australian, but the privately held company is based in San Diego. Lauer comes from another San Diego-based company, wireless technology developer Qualcomm Inc., where he was chief operating officer.

The first Memjet for the office market will be sold by computer maker Lenovo Corp. in China early this year and by other partners in Taiwan and India, the companies announced this week. Memjet hasn't announced a partner for the U.S., but Lauer said the printer would be sold here this year as well.

In a demonstration this week at the International Consumer Electronics

Show in Las Vegas, a prototype of the office printer churned out color pages, one per second, of a quality indistinguishable from a good inkjet printer.

"It's a disruptor in that it's very fast for a very low price," said Keith Kmetz, a printing industry analyst for IDC. The technology "has had the market abuzz," he said, but he added that there's more to market success than technology. Memjet has still has to prove that its partners can market the printers effectively. Memjet has talked about its technology for years while it straightened out some kinks, so it won't catch well-established players such as Hewlett-Packard Co., Lexmark International Inc. and Canon Inc. by surprise.

"I haven't noticed in my conversations with them that they're gravely concerned," Kmetz said.

Memjet isn't targeting consumers with its printers, at least for now. The home printer market is even tougher than the office market, because manufacturers such as HP subsidize their products heavily, then make the money back from sales of ink cartridges. Fast printing isn't as important to consumers, who are also printing less and toting more information and pictures around on their smart phones.

Memjet is targeting commercial printing applications, such as photofinishing, with a unit that prints page-wide glossy photos. The goal is to replace drugstore minilab prints, which are still mostly created using light-sensitive paper and noxious chemicals. Memjet's unit is smaller, cheaper and faster. Prints from a prototype shown this week weren't as vividly colored as regular minilab prints, but Lauer said the technology is still being tweaked.

Label printers with Memjet's heads are already in use. This means that a company such as FedEx Corp., for example, that prints millions of

barcode labels every day could now add color to them, perhaps for its logo or other information that should stand out, Lauer said. The technology could also be used in cash registers, which would let retailers print out coupons in color on receipts. However, the 8.5-inch wide Memjet head is too broad for a cash register, so Memjet would have to make a smaller one.

One customer, Lauer said, uses the label [printer](#) to print tens of thousands of personally addressed direct-mail envelopes every day, without needing to pre-print the color with standard, high-volume "offset" printing.

"Yes, you can now get your junk mail in color," Lauer said.

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