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## MIT suffers hubris over \$100 PC idea

First roses, roses

By [Doug Mohney](#): Sunday 13 November 2005, 07:06

**CAN THE** MIT Media Lab really outsmart the hungry-for-profit personal computer industry?

It's an interesting question. The MIT Media Lab thinks it can develop a \$100 [laptop](#) in order to "revolutionise" the way children around the world are educated. The media lab, backed by a non-profit organisation dubbed One Laptop Per Child (OLPC) says it will have units ready for shipment by the end of 2006 or early 2007, with a basic unit being a rugged full-screen, full color laptop that's Wi-Fi enabled, "lots" of USB ports, Linux-based, with a 500MHz processor, 1GB of RAM, and a 1 megapixel display.

No hard drive, however. Power is going to be provided through a wind-up crank and other sources. The actual display technology is up in the air depending on the day of the week, ranging from "electronic ink" to a rear-projecting image device.

There's been a lot of media fawning over the idea, but nobody's really asked how a non-profit organisation is going to go from mockups to hardware in about two years, especially when you're talking about minimum quantities of five to 10 million machines "paid for and ordered in advance." Minimum order by third-world countries would be one million units. And the Media Lab tosses out a total number of 100 million units they anticipate shipping around the globe.

Right now, the computer industry in total is expecting to ship around 200 million PCs in 2005, including desktops and laptops; IDG says less than 200 million, Gartner says slightly more. Depending on the analyst group, anywhere from 33 to over 50 percent of that number is laptops. With a high of around 100 million laptops and a "low" 66 million, OLPC expects to generate new demand for a low/no-margin product that would require around a 7 to 10 percent surge in unit production if they line up enough orders for a mere 5 to 10 million machines on a slow ramp.

Let's see, build Xbox 3 for Microsoft or build PCs for charity. Hmm, tough choice there.

Interestingly, the PC industry is already close to the magic \$100 price point, if you want to do an apples-to-oranges comparison. Wal-Mart is selling a laptop for \$478 that's tricked out with a VIA C3 processor at 1 GHz (check), a 14" LCD (check), 128 MB (short), a 30GB hard drive, CD-ROM, four USB 2.0 ports, and a version of Windows. No Wi-Fi, no power-crank, no ruggedness. In theory, you could trade off the 30 GB hard drive and the CD-ROM for 1GB of RAM and some sort of integrated Wi-Fi capability, and then you're down to \$300-350 or so, assuming you are buying in quantity directly from the manufacturer. It's not hardened against the rigours of dust and dirt of your typical third world schoolhouse either.

The Media Lab claims it can get savings out of three ways: 1) Getting the "Fat" out of the software (i.e. not using Microsoft products) 2) Dropping the cost of the display from the stock LCD display to a "novel" dual-mode display that both looks better and costs around \$35, and 3) Economics of scale for buying.

Wal-Mart has already ditched Microsoft in the example above. The display savings smack of serious academia vaporware. Either technology sketched out by the Media Lab – electronic ink or projection – hasn't shipped in quantity to consumer markets yet. E-Ink black and white prototype kits are shipping for the princely sum of \$3000 in small quantities. The Sony black-and-white LIBRIé is shipping today, but the thin display "book" replacement is around \$350-400. Even if you strip out all the markups and other components, that's a long way from \$35 for a simple black & white display, much less a color one. E-Ink must have some sort of great deal to ramp production and flood the market to drive down pricing.

Ultimately, the PC industry will edge down to a \$250-300 laptop price point on their own, potentially incorporating E-Ink's technology or some spiffy OLED breakthrough, but it's going to be a couple of years in the making. And until that happens, a \$100 PC is a pipedream because it's only the PC industry that will be able to crank the production lines and volumes necessary to keep pricing down. μ

## L'INQ

[Hubris](#), according to Mr and Mrs Wiki and their nuclear family

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