News in science

$100 laptop bridges digital divide

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Reuters

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Researchers have unveiled a US$100, hand-cranked laptop computer and say they hope to place them in the hands of millions of schoolchildren around the globe.

About the size of a textbook, the lime-green machines can set up their own wireless networks and operate in areas without a reliable electricity supply, Massachusetts Institute of Technology (MIT) researchers said at a UN technology summit.

The goal is to provide the machines free of charge to children in poor countries who cannot afford computers of their own, says MIT Media Lab chair Professor Nicholas Negroponte.

Governments or charitable donors will pay for the machines but children will own them, he says.

For US$100 students will get a rugged, WiFi-enabled laptop, which uses a Linux-based operating system and can be cranked up by hand when there's no alternative power supply *(Image: Design Continuum)*

"Ownership of the laptops is absolutely critical," he says. "Have you ever washed a rented car?"

Brazil, Thailand, Egypt and Nigeria are candidates to receive the first wave of laptops starting in February or March, and each will buy at least 1 million units, he said.

The laptop is not yet in production but one company has offered to build it for US$110 and four others are also considering bids, he says.

What do you get for US$100?

The computers operate at 500 megahertz, about half the processor speed of commercial laptops, and will run on Linux or some other open-source operating system, he says.

They can be folded in different ways to serve as an electronic book, a television or a computer.

A bright yellow hand crank that sticks out prominently from the side serves as an alternate power source when batteries or an electric outlet are not available.

The computer uses a screen from a portable DVD player, which can be switched from colour to black and white to make it easily viewable in bright sunlight, says Dr Mary Lou Jepsen, the project's chief technical officer.

A free laptop program in the US state of Maine has increased school attendance and boosted participation, Negroponte says.

"If you get those kinds of results, I'm going to build the machines," he says. "There's enough passion and enough kids that are able to do things they were not able to do before that justifies it."

Negroponte says the machines might be commercially available to the general public at a higher price, perhaps US$200 or so.

But their bright colour and distinctive appearance should discourage anybody from stealing or buying one from a student, he says.

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