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## \$100 laptop set for launch

**The first \$100 laptop prototypes are to reach children in the developing world in the next few days, the consortium developing them has said.**

The One Laptop Per Child laptops, conceived and produced by a philanthropic group of designers and engineers led by Nicholas Negroponte - co-founder of the Media Lab at Massachusetts Institute of Technology - would begin arriving "within the next week," the project's chief technical officer, Mary Lou Jepsen, explained.



It is hoped the laptop will bridge the digital divide

She told BBC World Service's Digital Planet programme that the design of the \$100 laptop was highly innovative, centring on a CPU, or processor, that saves power by knowing when to turn itself off.

"The reason the CPU is usually on on a laptop is simply to refresh the screen, so in the timing controller chip for the display we put some memory - so when nothing's changing on the screen, it goes into self-refresh mode to save power," she explained.

"Half the kids in the world have little or no access to power, so it's been much harder to make a two-watt laptop.

"It's two watts because a kid can then use a crank or a foot pedal to recharge the batteries on their laptop - for six minutes' [work], they get an hour of charge. That seemed like the ideal ratio to us."

### Flash exploit

The idea for the laptops was first reported early last year, ahead of the scheme's official launch at the World Summit on the Information Society.

The plan is to bring affordable computing to school children in the developing world, chiming with the United Nation's aims of bridging the "digital divide" within the next decade.

A total of 1,000 laptops have been produced so far, with plans to ramp up production from thousands to millions within a few months.

Ms Jepsen said one of the keys to developing the laptops had been the "iPod revolution" which had shown how flash memory could be exploited.

The \$100 laptop uses flash memory rather than a hard drive - which Ms Jepsen described as "expensive, power-hungry and the leading cause of hardware failure in laptops".

"We had to find a way to get rid of them," she added.

The other important factor in getting the price down, she said, was the screen - which in a normal laptop alone costs over \$100.



Nicholas Negroponte led the development of the idea

"Radical new performance" had been achieved through a "re-think of the fundamental design of the screen," meaning that the cost of the screen for the \$100 laptops is a third of the usual price.

It also takes a maximum of 14% of the power consumption, as well as being readable in sunlight, and has a high-resolution.

"That's important because the justification for the expenditure by the ministry of education is book replacement," said Ms Jepsen.

However, there have been claims that once distribution and repair costs are taken into account the true cost of the laptops is nearer \$1,000 than \$100.

Ms Jepsen admitted that these costs do exist, but said they were "literally pennies per month".

"There is, in kind, contribution from the governments that do the distribution of the laptops, but other than that we're dropping 100,000 units a month to each country," she added,

"And that is not very expensive - it really is cents per laptop to ship."

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