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OLPC XO-1 (One Laptop Per Child) review: OLPC XO-1 (One Laptop Per Child)

The OLPC XO-1 (One Laptop Per Child) ultraportable celebrates its ability to communicate with people around the corner or around the world. It's a simple, practical wireless laptop packed with cool new technologies and stuffed with open-source software

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4 min read

Why should rich Western kids get all the cool kit? Nicolas Negroponte's ambitious plan to bridge the global digital divide has borne fruit at last. The XO-1 costs twice as much -- $200 (£100) -- as he'd originally hoped for, and lacks the hand-powered crank that would have freed it from the grid completely. But otherwise it's a cyber-hippy's dream come true: a simple, practical wireless laptop packed with cool new technologies and stuffed with open-source software.

7.5

OLPC XO-1 (One Laptop Per Child)

THE GOOD

Powerful; simple wireless networking; bullet-proof build; open source programs.

THE BAD

Sluggish graphical user interface; over-complex file handling.

THE BOTTOM LINE

The OLPC XO-1 isn't a substitute for your current laptop -- it's a digital lifeline for children on the margins of our connected world. The fact that it's as cool, fun and flexible as it is educational only shows how much thought has gone into its revolutionary design

It's currently not available for sale to consumers, although Negroponte has said that the UK is in line for a 'Give 1, Get 1' donation programme during 2008.

Design
The XO-1's primary audience is children, who'll love the bash-it-about ruggedness, textured plastic housing and comfortable built-in grip -- no need for a poncy laptop sleeve here. There are dozens of smart design touches, from the show-off -- flip-up Wi-Fi rabbit ears that also lock the keyboard in place -- to the simply sensible -- the three USB ports are in different orientations to suit different devices and cables.

Open up the 7.5-inch screen and you're faced with a splashproof ZX Spectrum-like rubber keyboard that's definitely on the squashed side for adult fingers. The keys need a good firm press to work, but are very well laid out in a PC style, with dedicated volume and brightness buttons -- but no Caps Lock. There have been reports of problems with the touchpad, but ours worked fine.

The screen itself has gaming controls on either side -- a direction pad and four action buttons. There's also a button to flip the screen's orientation, as it can rotate through 180-degrees like a tablet, and fold back in over the keyboard. In normal use, the screen is a decent full-colour affair that's fine for Web browsing. But pull the brightness down to its minimum level and the LCD transforms into an ultra-sharp mono display that looks fantastic in full sunlight -- and saves power, too.

Features
Most new computers are built from the latest components, with a healthy over-performance margin to allow for the demands of future software. Not the XO-1. A modest 433MHz processor has to handle operating system, software and graphics all on its own, with just 256MB of RAM to work with, and a mere 1GB of Flash memory storage.

A key feature is its wireless performance. Not only do you get full 802.11b/g functionality, but also 802.11s, which enables mesh networking -- even when powered down. Get within range of another XO-1 -- tested at over two kilometres in the Australian outback -- and you can piggyback on its Internet connection, swap files or enjoy multi-player gaming. There are dedicated buttons to pull up graphical maps of your local mesh 'group' and wider wireless neighbourhood.

Multimedia features are pretty good -- a built-in VGA webcam can capture video at up to 30fps, and the stereo speakers are loud, if tinny. The XO-1 also uses brand new battery tech -- lithium iron phosphate -- that promises to last the planned lifetime of the computer, an impressive five years.

Performance
Forget Vista or even XP -- the XO-1 struggles to run Linux under a super-minimalist GUI called Sugar. Supplied as standard are basic word processing, paint, calculator, chat, RSS and games software. The browser, based on Firefox, is great, and an open source Flash player (Gnash) even lets it work with some rich content Web sites (although none that use Java).

Creative tools are especially well represented. The TamTam music creation suite includes easy to use composition, sequencing and even synth tools, and there are numerous programming/scripting gadgets to introduce kids smoothly to computing.

It's easy to download new software from OLPC's online library, and the selection of titles (all free and open-source) is growing daily. Loading software and switching between packages isn't seamless however: there are

Because there's no hard drive, the XO-1 is completely silent in use and doesn't get hot. Battery life is a healthy three hours, depending on multimedia use, thanks to clever new controllers that power down a large portion of the chipset when it's idle.

There should be no problems with viruses, either, as OLPC's new Bitfrost security system forgoes firewalls and anti-virus software for built-in restrictions for each program that limits the data it can see and the hardware it can control.

Conclusion
How to summarise the XO-1: Is it an educational tool? A fundamental reconception of computing for the 21st century? Or simply a high-tech toy? The one thing it isn't is a normal laptop -- that over-powered portable entertainment unit for time-poor executives and bored students.

The XO-1 won't ramp up your digital productivity or amaze you with hi-def visuals. But what it might just do is remind you why computers are so cool in the first place. It celebrates its ability to communicate with people around the corner or around the world, access information, design programs and manipulate music, sound or pictures.

In short, this is a device for people who want to interact with the world beyond their keyboard. In an era when downloading other people's creativity accounts for 80 per cent of all Internet traffic, that can only be a good thing.

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