Bridging the Digital Divide

Closing the gap between the technological haves and have-nots has involved many, but few initiatives have been as dramatic as the $100 wireless laptop or the Freedom Toaster.

First announced in January 2005, the One Laptop per Child (OLPC) project plans to produce and distribute millions of $100 laptops to schoolchildren in technologically underdeveloped countries. The innovator, Nicholas Negroponte, was chairman of MIT's Media Lab when he left to head up the nonprofit OLPC. On July 31 of this year, Nigeria, Brazil, Argentina, and Thailand announced commitments to purchasing one million laptops each. Delivery is anticipated in the beginning of 2007.

According to OLPC's CTO Mary Lou Jepsen, "The $100 laptop offers a cheaper alternative to current textbook expenditures in much of the developing world, while also giving the child not only an infinite number of textbooks, but numerous entries to interactive, unbounded, and peer-to-peer learning."

The laptops have a 500 MHz processor, 128MB DRAM, 500MB flash memory (no hard drive), and four USB ports. The operating system is Linux, and the software will be Open Source. Wireless broadband will create local

area networks through mesh networks. The power source was a crank-operated generator, but several exterior generators are being tested. The cases are tough plastic that seal shut to keep out rain and dust as kids take them to and from school.

The dual-mode display is both backlit color and front-lit black and white. Jepsen explains, "It has higher resolution than 95% of the laptop displays on the market today; approximately one-seventh the power consumption; one-third the price; sunlight readability; and room-light readability with the backlight off (for e-books)." Check www.laptop.org for recent developments.

Meanwhile, in South Africa, a number of dispensers that look like they might be Orangina machines have been showing up in areas where poor Internet access makes downloading software impossible. The Freedom Toaster is a kiosk that will burn a free CD copy of the latest Linux operating system, OpenOffice's office suite, literature (from Project Gutenberg), music, and photography. Begun in 2004, the Freedom Toaster was invited to participate in this year's prestigious Stockholm Challenge for innovative IT. If you're interested in putting together your own Freedom Toaster, you can get the plans at www.freedomtoaster.org. ■