



BY LOU BERTIN

GOT XO?

One million children in developing nations will have a laptop—known as an XO—from the One Laptop Per Child initiative by the end of 2008.

BORN IN JANUARY 2005 AND THE brain-child of former MIT Media Lab director Nicholas P. Negroponte, the One Laptop Per Child initiative was formed with a single, trailblazing goal: to design, manufacture and distribute affordable laptops to school districts, states, nonprofits and countries for use in childhood education.

And laudable as those efforts undeniably are—and despite the backing of some of the technology industry's heaviest hitters—OLPC found that it was hardly exempt from the growing pains that afflict any fledgling organization.

That said, however, OLPC today has reached approximately 500,000 children in Afghanistan, Cambodia, Ethiopia, Haiti, Libya, Mongolia, Peru, Rwanda and Uruguay. Moreover, OLPC is on track to bring that total to one million of its XO laptops delivered by the end of this year, according to Clyde Rodriguez, OLPC board member and AMD Internet Solutions Group vice president.

"Now that OLPC has picked up momentum, the organization is focusing on addressing issues of scale and logistics to reach even more children," Rodriguez says.

The issues of scale Rodriguez cites appeared for a time to be the least of the worries OLPC was likely to face as recently as early this year, when Intel Corp. (which, along with AMD, was an OLPC

supporter) departed the OLPC board. Moreover, Microsoft Corp. (which is finalizing a version of Windows® XP designed to support the XO, a major validation of OLPC's aims and certain to boost the attractiveness of the XO in significant markets) had yet to throw its support and cachet behind OLPC and its open source XO.

The in-again/out-again questions regarding Intel underscored what was widely seen as an undercurrent of turmoil within OLPC, as evidenced by the departures of key executives, including former OLPC president Walter Bender and software security leader Ivan Krstic.

And although those events might be seen as typical of any newly formed organization, recent performance indicates that the turmoil has been overcome.

EMPOWERING CHILDREN

One factor contributing to the perception that OLPC was somehow flagging is the sheer visibility of its founder. At the program's inception, Negroponte was widely quoted as projecting that OLPC would sell 100 million to 150 million laptops to developing nations by the end of 2008.

That ambitious projection proved to be beyond OLPC's grasp, but as Negroponte has reflected, "I'm a visionary, not a manager." Enter longtime software executive Chuck



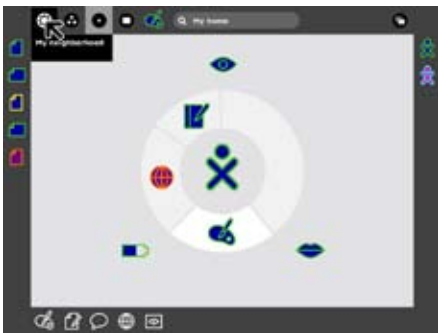
Kane, who became OLPC president on May 2. Microsoft in that same month agreed to develop dual-boot versions of XO that run both Windows and Linux. Performance, not promise, became the operational byword.

As Rodriguez views it, OLPC is moving ahead on a footing that serves its ultimate goal: "to get as many laptops as possible into the hands of children, to empower them in ways that traditional PC companies have never done before.

"A profound sign of OLPC's impact on the PC industry is the proliferation of a new class of low-cost laptops that never existed prior to the introduction of the XO. That effect is directly attributable to the work AMD and OLPC have done," Rodriguez says.

AMD is a technology partner to OLPC in several ways. First, as an ally in closing the digital divide with programs such as the 50x15 Initiative (see more on page 36), and secondly with innovative technology solutions that meet OLPC's unique needs.

The XO solutions OLPC are providing are powered by AMD Geode™ chips and were designed to take advantage of the processors' low power requirements, which



average 2 watts, versus the 20-to-40-watt requirements of standard laptops. Moreover, the open source machines feature mesh networks that enable children in local areas to see each other and interact online.

Designed for young students, the XO's user interface allows children to see what activities they and others in their communities are engaged in and, via a dual-mode touchpad that supports pointing devices and manual input, join in. Acknowledging the environments in which the devices are being used, the XO has been ruggedized to resist water and dirt and provides a dual-mode display with black-and-white (for outdoor viewing) and full-color options.

The environmental conditions in which the XO is being used are occasionally harsh, and so too was the reception when the XO was introduced into the long-standing educational cultures of the nations for which it was designed.

Amid allegations that OLPC was engaging in cultural imperialism by charging into nations' educational systems, Rodriguez responds by asserting that OLPC's mission is unambiguously about helping empower

Photos (from top left, P. 38): a classroom at the Galadima School outside of Abuja, Nigeria; Khariat boys check out their XO computer; two girls in Reaksmey, Cambodia type busily on their computers. Photos, P. 39, clockwise: Children enjoying technology in countries including Thailand, Mongolia, Arahauay Village, Peru and a classroom in Khariat Village, India; a view of the user interface.

children "in ways that many in developed countries take for granted. OLPC's intent was and is to make technology relevant to education," says Rodriguez.

"We know we're doing that in environments where children need shelter and power and water. That doesn't obfuscate the very real need to overcome barriers to learning. OLPC helps them do that in a very direct manner," he says. "One of the challenges of introducing technology in new areas is ensuring that it is sensitive to the needs of children and the environments in which they live. The XO has done a remarkable job of honoring those needs."

With OLPC's birthing pains fading, what's next on the agenda? According to Rodriguez, the primary goals are to continue to shave the XO's average \$188 price, to

continue to reduce power consumption requirements and to further OLPC's reach into developing nations.

"We have a metric that goes beyond traditional business measures," Rodriguez says. "We have an ambition to get laptops into the hands of kids worldwide. The benefits are hard to quantify when kids can go beyond what they were able to do earlier."

The best measure of OLPC's ultimate success, Rodriguez says, "is to see how the initiative is helping transform the lives of children, a fact often ignored by critics of the program. Go into a village where these systems are used, and you will see signs of meaningful change. It's intangible, but enabling children to develop intellectually in ways not previously possible will be our true measure of success." ■

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