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Let the games begin

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One Laptop Per Child to hold software jam for the XO

By Hiawatha Bray, Globe Staff | June 9, 2007

What will millions of poor children do with cheap laptop computers? Play games, of course. But not just any games.

The vaunted "$100 laptop" already being distributed in some countries by MIT professor Nicholas Negroponte's One Laptop Per Child program lacks the horsepower to run flashy 3-D games like Grand Theft Auto or World of Warcraft. Besides, the idea of the nonprofit is to educate as well as entertain.

That's why there's a move underway to build gaming software for the inexpensive laptop, known as the XO. There are already a couple of games available, including Block Party, a new version of the classic puzzle game Tetris. And Sesame Workshop, the nonprofit organization that produces the educational TV show "Sesame Street," is testing games, videos, and texts in Spanish and Arabic for use with the laptop.

But the laptop's developers don't want to rely on large organizations to produce its software. Instead, they hope small groups of motivated programmers will produce high-quality content in their spare time.

This weekend, about 17 game developers will try to do just that during a "game jam" at Franklin W. Olin College of Engineering in Needham. They aim to crank out seven or eight titles in three days, according to Kent Quirk, chief technology officer of Cognitoy LLC, a game development company in Acton.

"Games can't teach everything," said Quirk, who will participate in the jam, "but they can make some kinds of learning a whole lot more palatable."

One Laptop Per Child has designed the XO with a color screen, built-in wireless networking, and an electrical system that can be recharged with a foot pedal or hand crank. Prototype XOs are already deployed in schools in Uruguay, Brazil, Nigeria, and Thailand. While the machines now cost about $175, Negroponte predicts the price will fall to $100 or less when they are mass-produced.

The XO will use the free Linux operating system, instead of Microsoft Corp.'s Windows operating system. That means XO won't be able to run thousands of Windows programs. And while there are many good Linux programs, not all are suitable for the XO because of its relatively limited processing power. So XO designers are working to modify existing Linux software for the new machine, and to get new programs ready.

Lots of useful programs are ready, according to Walter Bender, One Laptop Per Child president of software and content. AbiWord, a simple Linux word processor, works fine on the XO. There's also a spreadsheet program called Gnumeric and a modified version of the popular Firefox Internet browser.

But games are high on the wish list, because of their potential as teaching tools. "Learning happens when you're in this sort of pleasurable state of frustration," said Quirk. "The best games put you in that state and keep ratcheting up the difficulty . . . games are the best platform for certain kinds of learming."

Jeffrey Fleishman, assistant vice president of business development for digital media at Sesame Workshop, said that while it is only testing games for the XO now, he hopes if it is widely distributed in developing countries, Sesame Workshop could produce a lot of specialized educational content tailored to the machines.

Participants in this weekend's jam will get access to prototype XO laptops, to ensure their code runs properly. In addition, the Sunday wrap-up of the event will feature a group of children, who will play the games and pass judgment on their quality.

Game jam coordinator Mel Chua said it's just the first of several such gatherings to produce useful software and content for the XO laptop. "We're hoping to have music jams, movie jams, curriculum jams," Chua said.

The software jams won't be confined to the United States. SJ Klein One Laptop Per Child's director of content, hopes the Needham game jam will serve as a model for software developers around the world. "We're trying to formalize this as an idea that anybody else can easily run," said Klein.

The laptops also include tools for making new software. As a result, users will be able to write their own programs tailored to specific needs. They can even hold their own game jams. Already, a group of XO users in Brazil are planning a programming spree for October.

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