Doing it for the kids, man: Children's laptop inspires open source projects

By Don Marti, LinuxWorld.com, 10/27/06

A network of developers who work on much of the most commonly used software on Linux is passing up multi-core monsters with gigabytes of RAM to target their code to a design of which only 500 prototype boards now exist: the "Children's Machine 1" from the One Laptop Per Child project. OLPC aims to put machines that function as a textbook collection and as a writing, drawing and music tool into the hands of schoolchildren, through large sales to national ministries of education.

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The CM1 is tiny and slow by current hardware market standards. Current prototype boards have a 500MHz AMD Geode processor, which is x86-compatible but lacks some features of newer AMD and Intel chips. The CPU is underclocked to 366MHz to save power.

The CM1 has 128MB of RAM and 512MB of Flash memory, and lacks a hard drive. A low-power display designed for extended e-book reading supports 1200x900 resolution in black and white, and a lower resolution in color. The wireless hardware, by Marvell, is capable of running as part of a mesh network without waking up the CPU.

But the project's software goals are ambitious, and include a collaborative browsing and editing environment for working with e-books and Wikis, graphics and sound editing tools, and a Python development environment. The project plans to use only open source software on the laptop, and all the pre-installed content is to be in patent-free formats.

OLPC needs big software changes to make all that work on the CM1. According to the laptop.org FAQ, "Today's laptops have become obese. Two-thirds of their software is used to manage the other third, which mostly does the same functions nine different ways." Continued

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