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OLPC eyes experimental battery for $100 laptop

More power to state-of-the-art Lithium Iron Phosphate option

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March 29, 2007 (Computerworld) -- For economic reasons, most of the components created for the **One Laptop Per Child** project's $100 notebook computer are innovations on tried-and-true tech, not state-of-the-art. That is, except for one aspect of the device: how the laptop generates and stores power.

Earlier this week, an OLPC official said that the non-profit group plans to test batteries relying on cutting-edge **Lithium Iron Phosphate** technology in its third batch of beta computers, expected in May.

Also known as LiFePo4, the material is reportedly safer and less toxic than Lithium-Ion (Li-Ion) batteries used in most notebook PCs sold today. While LiFePo4 batteries don't store as much energy as Li-Ion models, they hold more than cheaper Nickel Metal Hydride (NiMH) batteries, which until now the OLPC had said it **planned** to use.

The announcement, made at the **ShmooCon** security conference last weekend Washington D.C. was first **reported** by the independent One Laptop Per Child News blog. It was confirmed by Brian Warshawsky, vice-president of manufacturing for **Potenco**, an Alameda, Calif. company designing the laptop's other chief innovation: a string-powered generator that looks like a yo-yo.

Warshawsky estimates that generator can, when pulled by an adult for about ten minutes, generate enough electricity to power the laptop for 40 minutes of intensive use, such as watching videos, and up to 60 minutes when typing or surfing the Web. The laptops are aimed at children living in Third World poverty conditions, where ubiquitous electrical outlets and clean, steady power won't be present.

Getting cranky

Initially, the OLPC favored an electromagnet-embedded crank that users would turn to generate electricity. The crank, which was first situated on the laptop itself, was **moved** onto the AC adapter to minimize physical stress to the machine. That design was officially abandoned in September after the design by Squid Labs LLC, Potenco's parent firm, **emerged**.

Warshawsky, who **showed off** the latest OLPC unit at the **O'Reilly Emerging Technology Conference** in San Diego earlier this week, said pulling the string is not only less fatiguing, but it makes the computer more flexible to operate.

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