

Everybody is trying to grab a piece of the tablet action at the gadget geek fest known as the Consumer Electronics Show.

Among them, the One Laptop Per Child (OLPC) project, whose mission is to bring low-powered, low-cost devices to the developing world. They have just launched a hybrid computer that turns into a tablet, but plan to release a dedicated device by 2012. The new \$165 (about £106) XO-1.75 laptop will start shipping after the summer to countries around the world to bring school children into the computer age. Its precursor cost around \$199 (about £128) and OLPC says around two million have now been distributed. The big challenge with the new laptop was to reduce power consumption. OLPC chief technology officer Ed McNierney told BBC News they have slashed the wattage from five watts to two by using low powered ARM-based chips from Marvell technology.

"When I ask, 'How long do you think your battery has to last when you have no place to plug it in?' we know that is a big problem to solve," he said. "With this new design we can get between seven to eight hours of battery life. When we move to a tablet it will be 10 to 12 hours."

The XO-1.75's motherboard, which holds the chips and other components, sits behind the laptop screen, making it easy to twist around and use as a tablet device. The other half of the laptop houses the keyboard and battery.

Tablet focus

Even though OLPC did not have a tablet to show off like the scores of other companies here at the show, Mr McNierney talked about the focus that will drive the design.

"A lot of tablets are designed for entertainment and consumption, but that is not what we do," he said. "We really think the tablet needs to be a fully-functioning educational experience that is designed for creating, sharing, editing, enjoying and collaborating with other children and teachers."

The XO-3 tablet will have a screen the same size as Apple's popular iPad at 9.7in (25cm).

The particular market OLPC caters for has, in part, led to the tablet being delayed until next year.

"One of the major issues we have to deal with is making it unbreakable," Mr McNierney said. "Not many people would give their iPad to a six-year-old child and even fewer would give their iPad to a child that lives in the desert. "We need to have unbreakable display screens, long life components and a system that can be sealed with no openings to let in dust, sand and water."

The device will also include a cover to protect the screen and a solar panel to help solve power issues.

Low price

Chip-maker Marvell has sponsored OLPC's tablet project to the tune of \$5.5m (£3.5m). The firm's chips and processors will power a number of tablets including that of OLPC. But what will really make this device compelling is the price - \$100.

"The overall price is going to get competitive for all tablets as prices keep coming down," said Weili Dai, co-founder of Marvell (...)