

Abstract Category: Technology & Gaming

Electronic Demo

XO COMPUTER APPLICATION TO MEDICAL SCIENCE EDUCATION

Poster ID: TG7

*Charles Sneiderman, M.D., Ph.D. *, Paul Fontelo M.D., Michael Ackerman Ph.D.,
National Library of Medicine, Bethesda, MD. 20894 U.S.A.*

PURPOSE: We will demonstrate some of the hardware and software features of the current XO laptop computer and compatible open source software as a potential educational tool for health professionals.

METHODS: We received two XOs from The One Laptop Per Child (OLPC) Foundation in January 2008 and have explored in our laboratory the features and limitations which might be considered by educators in medical science in both developed and developing nations.

RESULTS: OLPC focused on designing, manufacturing, and distributing a laptop computer to be mass produced and sufficiently inexpensive to distribute to children in developing countries. The current model (X01) weighs 1.45kg and measures 25x25x3cm when folded flat or turned in e-book form. The X01 includes: built-in full motion camera and microphone for audio, still photography, and video recording; wireless communications capable of establishing a mesh network with other XOs and 802.11 b/g/n; dust and water resistant keyboard that is customized to national alphabets; lithium-iron-phosphate battery with 4-6 hour life and capable of 2000 charge cycles; liquid crystal display of 800x600 full color pixels which can be converted to an ultra-low power/high contrast black-and-white 1200x900 pixel display readable in bright sunlight. It contains 256MB of dynamic memory and 1 GB of flash memory with an SO slot for substantial expansion. The XO is based on a 433MHz x86 central processor, Linux operating system, and a graphical user interface developed especially for XO.

CONCLUSION: Many of the included software applications are sufficiently versatile that they will be useful at any level of scientific education and many are uniquely suited to a laboratory or clinical setting.

Notes: