FCAD's Hybrid Computing Media Lab Established for Fall 07 To Meet Physical And Mobile Computing Curriculum

From: Office of Program Director, Operations and Technology, Rogers Communications Centre

July 21, 2007 - The Hybrid Computing Media Lab was established to address the technological and curricular environment for the production of Physical Computing related to New Media installations and the development of curricula and production space related to Mobile computing. The lab is heavily booked for 07-08 with a projected 90% utilization in Winter 08.

The lab, like all labs associated with the Mixed Reality Production Cluster, has been designed to be multi-purpose in nature. It will have the personality of a "quick change artist" and is built upon the institutional knowledge gained from the establishment of the Shared Virtual Audio Production Lab shared environment and will be Ryerson's first physical lab built upon mobile furnishings, movable technology and stowaway laptops

The lab is being established in Room RCC-357 and will be able to quickly change layout through the use of existing mobile tables and chairs. Mobile cabinets will be arranged with technology specific to a variety of subjects and wheeled in and out of the lab as required. Rather than fixed workstations the lab will employ MacBooks as its computer base and instructors will make use of portable presentation technology to conduct formal workshops and lectures.

In terms of technology the committee establishing the room set a two year goal of 30 computers to be made available to students for classroom and production purposes. For September 07, the lab has secured 15 Apple MacBook computers that can be booked with the lab. Their hardware specifications are as follows;

13 – Black MacBooks with 13" Screen, 2.16GHz Intel Core 2 Duo, 2GB SDRAM, 160GB 5400 rpm Hard Drive and SuperDrive 8x

2 - MacBook Pro's with 15-inch Widescreen Display, 2.2GHz Intel Core 2 Duo, SuperDrive 8x, 160GB Hard Drive @ 7200 rpm, 2GB SDRAM.

There are two differences between the MacBook and MacBook Pro's. MacBooks Pro's have 1394B connections and come with high level graphic cards needed for advanced 3D applications. While the MacBooks do not come with a 7200 RPM drive, they are very capable for simple video editing using programs like iMovie and DVD creation using iDVD. Where 7200 RPM hard drives and/or advanced 3D for installations, faculty can employ the two MacBook Pros or three G4's that are part of the Hybrid Computing Media Labs inventory.

Other technology associated with the lab relates to projection, audio recording and audio playback. For production development use five Panasonic PT-LB50SU projectors two M-AUDIO Fast Track Pro's for audio recording on the laptops For quality audio playback, five Roland MA-10A Amplified Digital Micro-Monitors

The lab will also contain a substantial inventory of Physical Computing tools and hardware that will include electronic parts and scopes. A large inventory of disguarded PC's and electronic devices has been amassed by the RCC for use for activities in the HCL.

In terms of Software the lab's MacBooks contains the following titles Arduino, Gimpshop, Basic Stamp, Audacity, Processing, Eclipse, FireFox, Safari, Windows Media/Flash Plugins, Microsoft Word, Microsoft Powerpoint, Microsoft Excel, MAX/MSP/Jitter, iStopmotion 2, Deep Freeze, M-Audio Fast Track Pro Software, iTunes programmed to access sound effects server, iPhoto, iMovie HD, iDVD, iWeb, GarageBand, Photo Booth and Front Row

Beyond physical computing the other goal of the Hybrid Computing Lab was for the development of curricula and production space related to Mobile computing. This process will be initiated via a complement of mobile and networked gaming devices. The approach taken was to obtain an instance of each mainstream gaming system as well each mainstream mobile operating system and device involved in the creation of networked mobile devices.

These gaming and mobile devices include an Apple iPod (80 Gig), Nintendo Wii, Nintendo DS Lite, SONY PlayStation 3, Microsoft Xbox 360, SONY Playstation Portable, Nokia N800 NSeries Internet Tablet , HP iPAQ hx2490 Pocket PC and an Envision 32-inch LCD TV. The combination of WI-FI, Bluetooth and peer to peer in the UPuP environment are establishing new kinds of collaboration networks critical to the next generation workflow and design and will interoperate with the 802.11n wireless network installed to interconnect the Mixed Reality Production Cluster Labs.

More information on the Rogers Communications Centre and the shared FCAD facilities it offers can be found at www.rcc.ryerson.ca/technology/index.htm