

Rogers Communications Centre's Blu-Ray Research and Development Lab Pioneers BD-Live Content for Use in Education

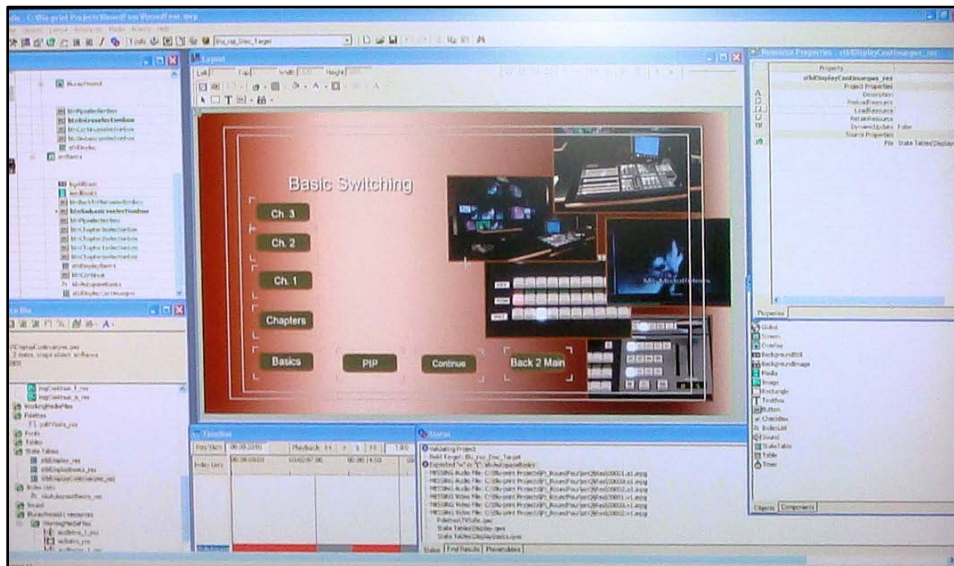
From: Office of Program Director, Operations and Technology, Rogers Communications Centre

July 2, 2009 – The Rogers Communications Centre Blu-ray Research and Development Lab was created to further explore Blu-ray as a mainstream medium for education, instruction and as an HDTV distribution medium. Over summer 2009, RTA Sessional Instructor and Masters Student Rob Carver conducted cutting edge research on the use of the Blu-ray optical format as educational media. It was the first project for the lab.



Masters Student Rob Carver

Working with trial software supplied by Sony Creative Software and Ensequence, Carver authored an instructional disc that utilizes Blu-ray's BD-Live interactive capabilities. BD-Live allows Blu-ray discs to interact with Internet data as part of its interactivity. Carver created media that enhances educational instruction with continually updated FAQ modules and by incorporating an on-line examination. Once students complete a module, they access the Blu-ray's interactive section which downloads a random selection of 10 multiple choice, true/false questions. When answered students then upload the results for instructor review and recording.



Blu-ray Authoring Interface

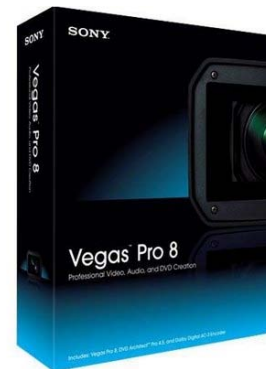
Blu-ray media, in conjunction with SONY's Playstation 3, is an economical distribution medium, especially for TV and Film students who chose to distribute their productions in 24 frame. In September 2009 the Rogers Communications Centre will equip its fleet of Intel based Apple MacPro computers in both its Enclosed Colour Correction Suites and its Advanced Media Lab I with Blu-ray writers.



Hardware in the lab centre's around an authoring station consisting of an ASUS P6T equipped with an Intel Core i7 920, 12GB Corsair DDR3-1333 RAM, 1TB of SATA2 storage installed in a 650W Clear Side case. For video an SLI Ready, PCI Express 2.0, Dual Link DVI, XFX GeForce 9800 GTX + Video Card that has 512MB DDR3 of its own along with HDTV and VGA support.

The workstation is equipped with an internal LG GGW-H20L 6X Super-Multi Blu Ray Writer. In addition to the LG Writer, the lab is also equipped with an Internet connected Blu-ray player. In this case it's a standalone PlayStation 3 80GB that SONY updates providing assurances that the hardware should work should BD Live firmware updates.

The first monitor in the system is a Sceptre X23WG-1080p 23in Wide 8ms DVI LCD monitor. Although its use is primarily a VGA monitor, its 1080p capability means it can also double as a 1080 display when checking HD Blu-ray material. To view Blu-ray media in 1080p and to act as a second production monitor the lab is equipped with a Sharp Aquos 32" 1080p Flat-Panel LCD HDTV (model LC32D64U).



Software in the lab includes mainstream titles quite suitable for authoring Blu-ray content. The line-up includes SONY's Vegas 8, Pinnacle Studio 12, WinDVD 9 Blu-ray Plus and ImgBurn which is a great donation based program for burning CD, DVD and Blu-ray media.

Other additional items in the lab are premium Blu-ray movie titles that have BD Live content and a PlayStation Blu-ray remote control. Unlike standard infrared remotes, the Bluetooth can be used without having to point directly at the PlayStation system.

In terms of Optical Media, Ryerson's Rogers Communications Centre has a long history of working with the medium. Highlights include;

- **1995** – Rogers Communications Centre engages in APG support overseeing seven Multimedia systems deployed University wide to develop multimedia applications for education. Support unit eventually evolves into Ryerson's Digital Media Projects Office.
- **1995** – Ryerson, via the Rogers Communications Centre, works with York University on University Space Network and project begins using CD-ROM base.
- **1996** - Rogers Communications Centre completes Retail Math Courseware Compact Disc marking the Rogers Centre's first educational compact disc series and providing the roots to what is now Ryerson's Online Retail Management Program.
- **1996** – Rogers Communications Centre completes Multilingual Insolvency CD ROM training series completed for Industry Canada. Series includes live hooks to Internet for content updates.
- **1999** – Rogers Communications Centre establishes Ryerson's first DVD authoring and production station established. LINES, a parallel film, is created to test the DVD's multi-angle capabilities.
- **2002** – Rogers Communications Centre's DVD Authoring Environment is harmonized to provide better classroom support in anticipation of an HDTV format to act as distribution medium for Centre's HDTV infrastructure.
- **2003** - The Rogers Communications Centre experiments with Interactive MPEG-4 Content developed using iVasts Software. It demonstrates both MPEG 4 video and its interactive capabilities as part of a High Definition documentary on the city of Toronto. MPEG-4 will eventually become part of Blu-ray optical media.
- **2008** – Rogers Communications Centre staff start shooting a 24p on the Queen Street Streetcar line. A 24p production workflow process is followed on PC using Studio 12 and on Apple Macintosh using Final Cut Pro. The outcome is Ryerson's first 24p end-to-end Blu-ray test distribution.
- **2009** - Rogers Communications Centre establishes the Blu-ray Research and Development Lab to study BD-Live applications.
- **2009** – Masters student Rob Carver demonstrates BD-Live capabilities in Instructional project that allows for updated content and student testing using an Internet connected Blu-ray player.

More information on the Rogers Communications Centre, the shared FCAD facilities it operates and the specifics of the labs that it operates can be found at

<http://www.rcc.ryerson.ca/technology/index.htm>