

Ryerson's Rogers Communications Centre 3D Production Capability Now Complete

Obtaining Panasonic 3D Camera and 65" plasma display provides a complete 3D workflow for Ryerson University.

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

December 1, 2010 – Continuing its tradition of ensuring leadership and relevance in the wake of technological advancement, the Rogers Communications Centre has just completed technology acquisitions that allow for complete 3D production workflow in-house. The technology, which will be shared by FCAD's Schools of Image Arts and Radio and Television Arts, will also be employed in the Universities cutting edge production research in 3D for television and cinema.



Amongst the latest acquisitions is an integrated Panasonic AG-3DA1 3D professional camera that democratizes 3D production by providing videographers with a flexible and easier-to-use tool for capturing 3D content as well as providing a training tool for educators. Weighing less than 6.6 pounds, the AG-3DA1 is equipped with dual lenses and two full 1920 x 1080 2.07 megapixel 3-MOS imagers. The camera can record 1080/60i, 50i, 30p, 25p and 24p (native) and 720/60p and 50p in AVCHD. It can record for up to 180 minutes on dual 32GB SD cards in Panasonic's professional AVCHD PH mode. The camera offers professional interfaces including dual HD-SDI out, HDMI (version 1.4), two XLR connectors, built-in stereo microphone and twin-lens camera remotes.

To provide both advanced 3D and 2D monitoring, the Rogers Communications Centre also obtained a THX certified 65" Panasonic TC-P65VT25 plasma flatscreen. Being both of a plasma construction and THX certified, the 65" screen replaced an early three hundred pound HDTV prototype CRT monitor that the Centre had been using. The monitor is the first device on the Ryerson campus that comes complete with an HDMI 1.4 input along with professional contrast range to show precisely what users shoot in 3D. The THX capabilities allow the 65" plasma flatscreen to be aligned to display appropriate contrast and colour settings for critical viewing, a function was lacking on LCD monitors the Centre had purchased in the past.



These latest acquisitions build upon Ryerson's Rogers Communications Centre's investments that ensure student projects in the Faculty of Communication and Design are able to be produced advanced media in both 4K and 3D forms. In the past year these investments included a Red Digital Red One 4K digital cinema camera, provided for editing of a 3D music video and provided for in-house research relating to 3D visualization. The result was the establishment of the Advanced Digital Cinema Non Linear Editing Suite that is geared to remain on top of advances in Digital Cinema editing relating to 3D with capabilities to work with 4K media and beyond.

The suite houses Ryerson's most advanced Apple Mac Pro installation and includes 512MB ATI Radeon HD 4870 graphics capability, 32 GB of RAM, dual 2.93GHz Quad-Core Intel Xeon CPU's, a Mac Pro RAID card, a Quad-channel PCI Express 4Gb Fiber Channel for X-San connectivity, four 7200-rpm 2TB Serial ATA hard drives capable of sustaining 3Gb/s, an 18x SuperDrive and two 30" Apple Cinema HD displays running Apple's Final Cut Studio.

To work with 3D media, the suite contains CineForm Neo3D that allows for professional 3D Editing for Film and Broadcasts. Neo3D allows editors to employ and evolve traditional 2D industry editorial and effects tools into feature-rich 3D editorial tools. CineForm's Neo3D provides a real-time 3D editing workflow within Apples Final Cut Studio which is the editing package employed in the suite.



For monitoring and adjusting 3D, the suite employs a JVC monitor model GD-463D10U. It's a 46" flicker-free 3D display has been employed in the creation of many of Hollywood's 3D movies. The monitor requires inexpensive (passive) polarized glasses to watch 3D content and can be used at anytime for conventional 2D display HDTV display.

The suite also contains a Colorist Command Station for color correction. JLC Cooper's Eclipse CX Midnight is fully integrated into the editing software and has a Midnight finish and white LEDs and indicators to reduce light emissions and intrusion on colorist's eyes. The Eclipse CX Midnight is a professional-quality control surface and features a full array of controls including 3 custom transparent, backlit trackball mechanisms with purpose designed, free-spinning control rings.



The suite also provides for real-time 4K playback through the use of Red Digital's Red Rocket Card. The card contains Quad DVI and Dual Link HD-SDI that decodes and debayers 4K R3D files in real-time. The card has capacity to play full quality 4K in real-time to a 4K monitor or projector from DVI output. The system is currently configured to play full quality 2K/1080P scaled from 4K via the Dual Link HD-SDI on the RED Rocket card.

The Advanced Digital Cinema Non Linear Editing Suite is part of a number of advanced 3D, Digital Cinema and Non Linear Editing Facilities found in Ryerson's Rogers Communications Centre. The Centre is home to a number of technologies to explore the new digital 3D medium that goes well beyond that found in the Cinema. The Centre's Emerging Technology Impact Lab (ETIL) is ground zero for experimentation in the medium. The ETIL is a lab focused on the study of new media technologies and provides an environment for experimentation with a number of simple and inexpensive 3D technologies. These technologies include 3D mediums employing digital photography, 3D Augmented Reality and live web streaming in 3D. They range from Autostereoscopic displays to a 33 seat portable projected theatre system to display 3D media from all scientific, entertainment and communication fields.



More information on the Rogers Communications Centre can be found at <http://www.rcc.ryerson.ca/technology/index.htm>