# learning, virtually

Almost 50 years to the day that Ryerson hosted Canada's first television studio broadcast, details were finalized with Hitachi Denshi Canada to equip Television Studio C with cameras that are both digital and 16X9 capable. The installation included securing 16X9 monitors also supplied by Hitachi. These new capabilities will help the Rogers Centre address today's realities such as the transition to the HDTV 16X9 environment as well as all things that are happening on the digital end of television studio production. In an era where it seems like everything is "going digital" television is no exception and with digital television comes new production equipment and techniques.

**STUDIO C IS BEING MADE INTO A FULLY DIGITAL TELEVISION PRODUCTION FACILITY, WHICH COMES WITH SIGNIFICANT IMPROVEMENTS IN QUALITY**

Studio C is one of the Rogers Centre's four television studios and is the first to be upgraded from a traditional analogue environment to a digital television studio. Ryerson is Canada's largest educator in studio production and the installation puts the studio on the "cutting edge." The studio is shared by several University programs including Theatre, Early Childhood Education, Image Arts, RTA, Continuing Education and the Graduate Program in Culture and Communications.

"The way modern television studios are set up, everything requires an overhaul," commented Terry Harvey, Manager of Broadcast Systems Engineering. "Studio C is being made into a fully digital television production facility, which comes with significant improvements in quality." The new camera equipment will work in the 16X9 aspect ratio, known to most people as "wide-screen." Digital TV sets in the future will all be in this wide-screen format similar to the shape of a movie theatre screen. "By shooting with 16X9, it means the relearning of a lot of techniques," he added. "What it also means though, is a larger screen and better pictures."

The new cameras provide the foundation to explore another area of new technology known as Virtual Sets. "Because of computer technology there is now a means to create lifelike sets in 2D or 3D. This allows a performer to be in exotic surroundings without spending a lot of money," said Harvey. "Hamilton's OnTV station uses this technology to create the sets for the newscasts it originates."

Traditional blue-screen technology creates an artificial background behind someone. Also called chroma-key, this has been the process used for most weather maps on TV news shows. It is the same technique that made Superman fly in the movies. "However, this is a step beyond that," adds Harvey. "With virtual sets, people are able to move around and behind pieces of the set." Virtual sets use computers to create settings which are superimposed on to a blank set. It also makes use of new camera tracking technology that communicates between the camera and the computer."

Beyond the news application, Virtual sets are now being used on TV game shows. The advantages over real (hard) sets are numerous. To begin with, virtual sets are less expensive. Once the technology is purchased, creating new sets costs very little. One virtual set can be transformed in seconds to something else by the touch of a few buttons. There is no time lost changing sets, and no space lost storing sets not in use. Sharing a studio becomes simple and inexpensive.

The digital camera technology and 16X9 monitoring equipment that opened the door to all of these possibilities would not have been possible without the corporate support of Hitachi. "This yet again demonstrates what amounts to a long term commitment by Hitachi Denshi to assist Ryerson Polytechnic University with its needs for television studio cameras," commented Michael Murphy, Academic Director, Rogers Communications Centre. "This is the second television studio Hitachi Canada has helped the Rogers Centre to equip after having assisted us with RTA's television Studio B three years earlier. There is a real commitment to education from Hitachi along with an understanding of the realities inherent with this kind of training in the educational field."

"Now that the cameras are in place, the transition of Studio C to the complete virtual/blue screen environment will occur in stages over the next few years," comments Brad Fortner, Operations Manager. "By year's end a digital switcher will be installed and at that point we can better address the blue screen environment from a digital perspective. For Image Arts and RTA they would have liked to have had the environment yesterday," Fortner smiles.•