

## Digital cinema in real time

### The Challenge

As the cost of film production rises, the next phase in the evolution of next-generation cinema production involves real-time collaboration at the production level and significant, dedicated bandwidth.

### Background

Traditional film is diminishing as a medium for cinema, ultimately to be replaced by digital technology that relies on ultra-fast, ultra-large bandwidth networks and advanced collaborative middleware that can allow producers and artists to share, in real time, file sets that are measured in terabytes. Ryerson University's Rogers Communications Centre, which houses the university's media schools, has opened a new digital lab complete with state-of-the-art equipment.



### ORION and CANARIE Make a Difference

Connecting to ORION and obtaining user controlled lightpath technology from CANARIE has allowed Ryerson University to establish itself among the global leaders in digital media production.

Dedicated advanced optical network links allow Ryerson to collaborate with global partners and become a founding member of CineGrid, an international non-profit research consortium that focuses on the development and demonstration of networked collaborative tools using grid technologies to enable the production, use and exchange of extremely high quality digital media over photonic networks like ORION and CANARIE. The ultra high bandwidth permits filmmakers, technicians and students at Ryerson and other institutions to see, hear and manipulate the same material in real time with no time lag, no matter where they are physically located.

### Results

In a world first in Fall of 2007, Ontario and Ryerson University were at the centre of a transatlantic high-speed film production collaboration demonstration using advanced network technologies, enabled by a 10 Gbps lightpath linking the Toronto site to Ryerson's CineGrid partners in Prague and California at the University of San Diego.

The technology has the potential to place Toronto and Canada at the forefront of the emerging digital cinema movement as a leading post-production centre. This will enable collaboration on projects with other students, hands-on training with next-generation equipment, and practical experience with what is reputed to become the new standard medium of the industry.

### The Impact

*"Digital cinema allows filmmakers to do everything they can already do with film, and more. It's a whole new medium so there is still a lot to explore, and awareness about the benefits of going digital is still growing."*

- Paul Hearty, director of the Rogers Communications Centre at Ryerson University