

Connected Together

Connected to the World

Next-generation network

ORION is a next-generation optical network dedicated exclusively to research and education (R&E).

Ontario's gateway to global networks such as CA*net 4, Internet2, GEANT and APAN, ORION brings exceptional new capabilities to Ontario's researchers, educators and learners.

Ryerson University researcher



Ontario's award-winning Advanced Broadband Enabled Learning (ABEL) initiative



Lakehead University "smart" classroom



Who's connected

- universities and colleges of applied arts and technology
- teaching hospitals
- research institutions and facilities
- school boards
- special research projects and partners

Our purpose

Our purpose is to link researchers, educators, scientists, learners and innovators in Ontario to one another, to colleagues around the world, and to networked resources so they can advance research, learning, knowledge, technology development and scientific discovery.



Transforming learning

Teaching and learning are being transformed as new instructional and learning technologies and resources become available.

High-capacity networks are essential to next-generation classrooms, labs, music rooms and learning facilities.

ORION allows schools to offer virtual classes, connecting multiple sites and bringing teaching specialists to classrooms.

What ORION enables

- Access to major databases, online academic and research resources, and digital libraries from around the world.
- Virtual classrooms, supported by broadcast quality video-conferencing across multiple institutions.
- Distributed computational modeling and visualization resources and simulation capabilities.
- Collaboration tools that allow scientists, educators and learners to use shared resources for new discoveries.
- Access to data gathering arrays including distributed sensors, instrumentation and monitoring devices.

Building our research capability

The means of conducting research are rapidly being transformed around the world and thanks to ORION, Ontario is able to participate as a vital player.

Researchers need advanced networks like ORION to allow them to fully participate in global research and scientific collaborations in

- mining the human genome data;
- finding cures for disease;
- modeling climate change;
- assessing environmental impacts;
- exploring the universe;
- developing new vaccines;
- mapping ocean floors; or
- global-scale sensor grids.



Marc Durand, faculty member at The Royal Conservatory of Music in Toronto, gives a piano lesson to Lucas Porter, 1,800 kilometres away in Nova Scotia, using the MusicPath technology



Niagara College Centre for Advanced Visualization



Quick Facts

ORION spans 5,800 km.

Among the largest R&E networks in the world.

Connection points in 21 cities and a high-capacity ORION Optical Exchange in Toronto.

Connecting Ontario's postsecondary system

ORION provides critical infrastructure for Ontario's entire postsecondary system – putting every institution on the same footing while enabling each to further develop its unique strengths.



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