



ONTARIO'S BACKBONE OF INNOVATION

SNAPSHOT 2011

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We live in a time when the right connections are key to getting new ideas to market, to building strong companies and healthy economies. ORION's advanced network is critical infrastructure for enabling the work of Ontario's researchers, scientists, teachers and students; it is transforming the way Ontario researchers and organizations collaborate with each other and their colleagues around the world. With ORION, Ontario can continue to lead and discover and leave its mark in the global race for innovation.

-George Ross, Deputy Minister of Research and Innovation

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Letter from the Chair

On behalf of the Ontario Research and Innovation Optical Network (ORION) Board of Directors, I am very pleased to present this report as a snap shot of our business. Over 10 short years, ORION has become an indispensable part of Ontario's research and education (R&E) sector, contributing over \$140-million to Ontario's GDP, and supporting more than 2,100 research jobs in education, physics, environmental science and many other disciplines annually*.



As a board, we've been focused on the future. We understand that building a solid foundation is a key element in moving forward. Our first step has been to upgrade the ORION Network to 100 Gb/s, making it the fastest R&E network in the world. This historical upgrade was supported with ORION's own funds. Use of this world class network is growing at a rate faster than the industry norm, while maintaining reliability rates that meet the needs of our customers.

As we look outwards to our member institutions, we are continuing to look at how we can use the network to meet your growing needs and how we can better meet the needs of Ontario's growing innovation strategy. We have received accolades from the Ministry of Research and Innovation and the Ministry of Economic Development and Trade for our vision to empower research and foster social and economic growth by connecting 1.8 million researchers from approximately 100 organizations across Ontario.

These achievements have been supported by strong leadership. In August 2010, we appointed Dr. Darin Graham as the new President and CEO of ORION. I would like to thank Darin for his strong leadership to date and his capacity to marshal us into the future of R&E activities. I'd also like to thank the Board members for their ongoing contribution and insights in guiding the strategic direction for the organization.

We are thrilled at ORION's success and we look forward to an exciting future. Most importantly, we are motivated by Ontario's best and brightest, who have adopted ORION to advance their innovation and research. We look forward to continue working with all of you.

Anne Sado
Board Chair



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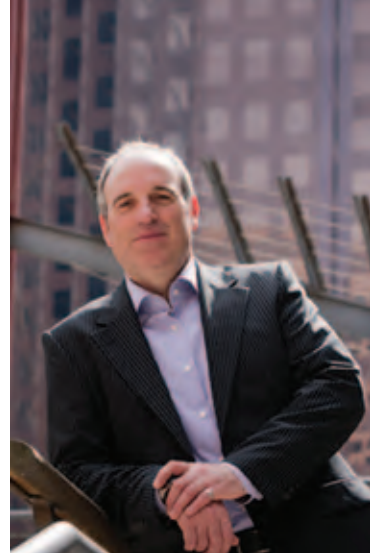
October 2002

Work begins on building one of the world's largest R&E networks.

Letter from the President

For ORION, it's not about the technology or the network, it's about the people. We connect people to each other and to the digital resources they need to do their work faster and more efficiently. Through this connection, we facilitate collaboration and innovation.

We've been busy advancing how we do business and creating a clear path for where our business is headed. We're shifting our focus to you. We're looking outwards to work with you to formulate solutions that work for you. We're excited to be putting you at the centre of our planning and work.



ORION is now focused on three main areas; focusing on our consumer, improving our core business and adding value for our members.

1. Focusing on customers:

We are dedicated to shifting the focus from us to you. We have begun this shift by changing our strategic planning process to include inputs from our members. We will continue to listen to the needs of our members and respond.

2. Improving our core business – the ORION Network:

Our biggest asset is the network and we are focused on making it better, faster and more reliable. That's why this past year ORION successfully operationalized the world's first 100 Gb/s R&E network making it one of the fastest networks in the world. We're proud of this capacity and will ensure that we will maintain our edge to enable what you need.

3. Adding value for our members:

Lastly we have focused on how we leverage this great asset that we have, providing unmatched value to our members. We are excited to introduce the ORION Nebula, ORION's cloud of services and providers, which will improve business functions and reduce costs. Soon it will even include advanced computing support by making cloud computing cycles readily available and larger access to data centres connected to the ORION Network.

While the scope of this seems vast, we are already well under way with many of these initiatives. I speak for the entire team when I say that we look forward to our new future and are excited that you'll be involved.

Thank you for your continued support.
Darin P. W. Graham, PhD
President & CEO

A handwritten signature in blue ink, which appears to read 'Darin P. W. Graham'.

ORION's Mission

As **Ontario's backbone of innovation**, ORION dedicates itself to connecting and supporting all of our research, education and innovation customers throughout Ontario.

We are recognized as providing leadership and critical infrastructure that allows them to collaboratively engage in **making Ontario a global leader in innovation**.

With the **world's fastest research and education network** we enable our users to be connected to a world of possibilities.

And by linking them through our network to a variety of strategic partners, we deliver a collection of **unique value-added capabilities** that enhances their pursuit of knowledge, social impact and economic outcomes every day.

03

February 2003

The first ORION connection is completed and tested between Laurentian and York Universities.

03

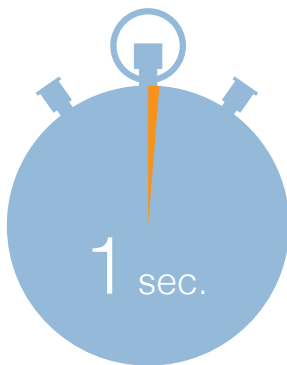
April 2003

ORION and the Ontario Government invest \$5.5 million to connect institutions to ORION, leveraging \$8 million in additional local investment.

Why is ORION critical to research, education and innovation?

ORION is the private broadband network that connects our member institutions to each other, and to a global grid of private networks. Traffic over the ORION Network supports innovations in research and education by providing high capacity, equal access and reduced operational costs.

Few jurisdictions in the world today have a R&E network infrastructure that exceeds the reach and capacity of ORION, which spans nearly 6,000 km from Ottawa to Windsor, and as far north as Thunder Bay and Timmins. Other regions and countries are catching up to Ontario and we are implementing strategies to maintain our lead, including increasing our network from 10 Gb/s capacity to 100 Gb/s in 2010.



3

high definition DVD movies

At an astonishing transmission rate of 100 Gb/s, it takes only one second to download 3 high definition DVD movies, each of which is two hours long.



100,000

MP3 files

The 100 Gb/s broadband network can handle tasks such as the transfer of 100,000 MP3 files in 60 seconds or the concurrent live streaming of over 15,000 HDTV channels.

03

June 2003
ORION signs an agreement with SHARCNET to help establish one of the world's most powerful highperformance computing networks.

03

August 2003
Robust design and battery backup allow ORION to remain online during the Great Blackout of 2003, which affected most of Ontario and northeastern U.S.

Students learn from 'authentic' session with Canadian Museum of Nature scientist

Audio and video 'outstanding' quality with support of ORION connection

A biology class at Dr. John M. Denison Secondary School in York Region recently took part in a live demonstration by a research scientist at the Canadian Museum of Nature via videoconference connected over ORION.

Since both the school and the Canadian Museum of Nature are connected to ORION (and the Museum is also connected to CANARIE), the students enjoyed a smooth videoconference session.

"I was very impressed with the quality of both the audio and video throughout the session," said Steve Smallwood, the science teacher who arranged the videoconference session and Learning Lead with the ABEL Program. "At no time was there any noticeable drag or jitter that might result from high latency. It was as if our guest presenter was standing in the room with us the entire time. The ORION connection that supported this event is outstanding."



The session, titled Sea Lampreys: Sampling and Classification Techniques, covered life history, collection methods and fieldwork, and identification techniques.

Feedback from the students was positive. One student commented, "It's better to hear concepts from an actual expert than from a textbook." Another student said that, "the researcher had actual specimens to use (therefore we were able to appreciate the details) and his research is really current - happening right now - so that makes it more interesting."

"Claude Renaud [the Museum research scientist who led the session] did a great job relating to the students, supporting his presentation with a PowerPoint and actual specimens of various organisms. It was an authentic experience and I look forward to more opportunities in the next school year," said Smallwood.

04

March 2004

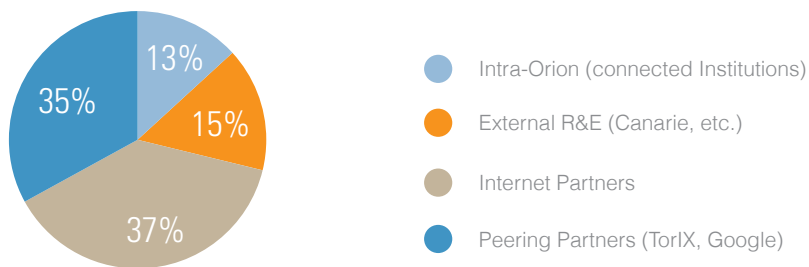
Final PoP becomes operational at Northern College in Timmins. 29 institutions now connected.

Use of the ORION Network

With an annual average growth rate of over 50% in bandwidth utilization ORION has seen phenomenal increased consumption in the use of its network. With more and more people harnessing the power of the network, in conjunction with increased network capacity and speeds, the pace of growth is forecasted to grow 8 times today's usage over the next five years.

With a rapid growth rate, continual growth in membership and increase usage of cloud services, like video conferencing, ORION needs to start planning for the next network upgrade within the next 3 to 5 years.

ORION Bandwidth Utilization by Use



As of June 2011

Peering is an agreement between two or more networks (i.e. Google or Rogers Communications with ORION) to directly connect with each other or indirectly over a public exchange like the Toronto Internet Exchange (TorIX), instead of going thru the internet. ORION is focused on strengthening its peering relationships with current providers, as well as future partners. To date, our customers have seen 35% of their commercial network traffic being rerouted through the ORION Network resulting in significant costs savings.

04

June 2004

First Ontario R&E Summit, bringing together leaders in research, education, science and government.

High school students witness heart surgery: 'Amazing experience'

Success Story

ORION high-speed link facilitates live viewing and real-time questions.

At Dryden High School, Grade 12 Kinesiology students took part in a live open heart surgery, conducted at Mount Carmel West Hospital in Columbus, Ohio. Connected through a videoconference link over the ORION Network, the Keewatin-Patricia District School Board students were able to watch and ask questions of the surgeons performing the three-hour surgery.

The live surgery is an initiative offered by the Center of Science and Industry (COSI), a science education centre in Columbus, Ohio.

"I would definitely recommend this opportunity to other teachers," said Jennifer Koski, Phys. Ed. and Kinesiology teacher at Dryden High School whose Grade 12 class participated in the event.

"It was an amazing and uncommon experience for the students. They came away with a more thorough understanding of the body and the surgical process."

"The class was excited leading up to the surgery since we had just finished learning about the cardiovascular system and we'd spent time exploring the fundamentals of the surgery online. The actual surgery reinforced everything the students had been learning so far and motivated them to learn more," said Ms. Koski.



05

June 2005

The ORION Awards are launched. Nine individuals are recognized for their achievements in bringing advanced Internet technologies to Ontario.

05

August 2005

ORION, CANARIE, Merit and NYSErnet sign an historic agreement to support cross-border collaboration in research and education.

The ORION Network





Who is connected to the ORION Network?

ONTARIO UNIVERSITIES

Algoma University, Sault Ste. Marie
Brock University, St. Catharines
Carleton University, Ottawa
Lakehead University, Thunder Bay
Laurentian University, Sudbury
McMaster University, Hamilton
Nipissing University, North Bay
OCAD University, Toronto
Queen's University, Kingston
Royal Military College of
Canada, Kingston
Ryerson University, Toronto
Trent University, Peterborough
University of Guelph, Guelph
University of Ontario Institute
of Technology, Oshawa
University of Ottawa, Ottawa
University of Toronto, Toronto
University of Waterloo, Waterloo
University of Western
Ontario, London
University of Windsor, Windsor
Wilfrid Laurier University, Waterloo
York University, Toronto

ONTARIO COLLEGES

Algonquin College, Ottawa
Cambrian College, Sudbury
Centennial College, Toronto
College Boréal, Sudbury
Conestoga College,
Kitchener-Waterloo
Confederation College,
Thunder Bay
Durham College, Oshawa
Fanshawe College, London
Fleming College, Peterborough
George Brown College, Toronto
Georgian College, Barrie
Humber College, Toronto
Lambton College, Sarnia
Loyalist College, Belleville
Niagara College, Niagara Falls
Northern College, Timmins
Sault College, Sault Ste. Marie
Seneca College, Toronto
Sheridan College, Oakville
St. Clair College, Windsor
St. Lawrence College, Kingston

TEACHING HOSPITALS / MEDICAL RESEARCH

Baycrest Centre for
Geriatric Care, Toronto
Centre for Addiction and
Mental Health, Toronto
Hospital for Sick Children, Toronto
Institute for Clinical Evaluative
Sciences, Toronto
London Health Sciences
Centre, London

Michener Institute for Applied
Health Sciences, Toronto
Northern Ontario School of
Medicine, Sudbury-Thunder Bay
Objective Pathology, Toronto
Ontario Agency for Health
Protection and Promotion, Toronto
Ontario Institute for Cancer
Research, Toronto
Ontario Telemedicine
Network, Toronto
St. Joseph's Health Care, London
Sunnybrook Health Sciences
Centre, Toronto
University Health Network, Toronto

ONTARIO SCHOOL BOARDS

Algoma District School
Board, Sault Ste. Marie
Algonquin Lakeshore
CSB, Napanee
Conseil Scolaire du Dist. des Écoles
Catholiques du Sud-Ouest, Windsor
Conseil Scolaire Public
du GNO, Sudbury
Greater Essex County District
School Board, Windsor
Hamilton-Wentworth Catholic
District School Board, Hamilton
Hastings and Prince Edward
District School Board, Belleville
Kawartha Pine Ridge District
School Board, Peterborough
Keewatin-Patricia District
School Board, Dryden
Lakefield College School, Dour
Limestone District School
Board, Kingston
London District Catholic
School Board, London
Near North District School
Board, North Bay
Northwest Catholic District
School Board, Fort Frances
Ottawa-Carleton District
School Board, Ottawa
Ottawa Catholic School
Board, Ottawa
Peel District School
Board, Mississauga
Peterborough, Victoria,
Northumberland & Clarington
Catholic District
School Board, Peterborough
Provincial Schools Branch,
Ministry of Education
Rainbow District School
Board, Sudbury
Rainy River District School
Board, Fort Frances
St. Clair Catholic District
School Board, Wallaceburg

Thames Valley District
School Board, London
Thunder Bay Catholic District
School Board, Thunder Bay
Toronto District School
Board, Toronto
Trillium Lakelands District
School Board, Bracebridge
Waterloo Region District
School Board, Waterloo
Windsor-Essex Catholic District
School Board, Windsor
York Region District School Board

RESEARCH, CULTURAL & EDUCATIONAL FACILITIES

Agriculture & Agri-Food Canada
Research Centre, London
Canadian Film Centre, Toronto
Canadian Museum of
Nature, Ottawa
Centre for Biologics
Research, Ottawa
Contact North | Contact Nord,
Sudbury-Thunder Bay
Canadian Science and
Technology Museum, Ottawa
Hamilton Public Library, Hamilton
Innovation Park at Queen's
University, Kingston
Laboratory for Foodborne
Zoonoses, Guelph
MaRS Discovery District, Toronto
National Research Council, London
Northern Centre for Advanced
Technology, Sudbury
Télé-Française d'Ontario, Toronto
Perimeter Institute for
Theoretical Physics, Waterloo
Research Data Centres
Program, Statistics Canada
Robarts Research Institute, London
Royal Ontario Museum, Toronto
SNOLAB, Sudbury
Waterloo Summit Centre
for the Environment

HIGH PERFORMANCE COMPUTING PROJECTS & FACILITIES IN ONTARIO

SHARCNET (Shared Hierarchical
Academic Research
Computing Network) at 17
participating institutions
HPCVL (High Performance
Computing Virtual
Laboratory) at 8 member institutions
SciNet at the University of
Toronto and 5 affiliated
research hospitals and institutions

Ontario's High Performance Computing (HPC) facilities linked over the ORION Network



SHARCNET The Shared Hierarchical Academic Research Computing Network

Brock University
Fanshawe College
Lakehead University
Laurentian University
McMaster University
Nipissing University
Ontario College of Art and Design
Perimeter Institute for
Theoretical Physics
Sheridan College Institute of
Technology and Advanced Learning
Trent University
University of Guelph
University of Ontario
Institute of Technology
University of Waterloo
University of Western Ontario
University of Windsor
Wilfrid Laurier University
York University



SciNet - University of Toronto

*Affiliated research hospitals
and institutes*

Baycrest Centre for Geriatric Care
Hospital for Sick Children
Mount Sinai Hospital
Ontario Institute for Cancer Research
University Health Network:
• Princess Margaret Hospital
• Toronto General Hospital
• Toronto Western Hospital



High Performance Computing Virtual Laboratory (HPCVL)

Queen's University
Royal Military College
University of Ottawa
Carleton University
Ryerson University
Seneca College
Loyalist College
St. Lawrence College

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Innovation and research excellence is all about bringing people and ideas together wherever and whenever. The ORION network continues to be the pre-eminent connector and facilitator in the knowledge infrastructure of Ontario. As ORION expands and broadens its services and capabilities, all researchers benefit.

- Michael Ridley, CIO & Chief Librarian, University of Guelph

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05

September 2005
Ontario's first new medical school in over 30 years is officially opened via a videoconference event over the ORION network, connecting the two main campus locations in Thunder Bay and Sudbury with locations in Toronto and Ottawa.

Services

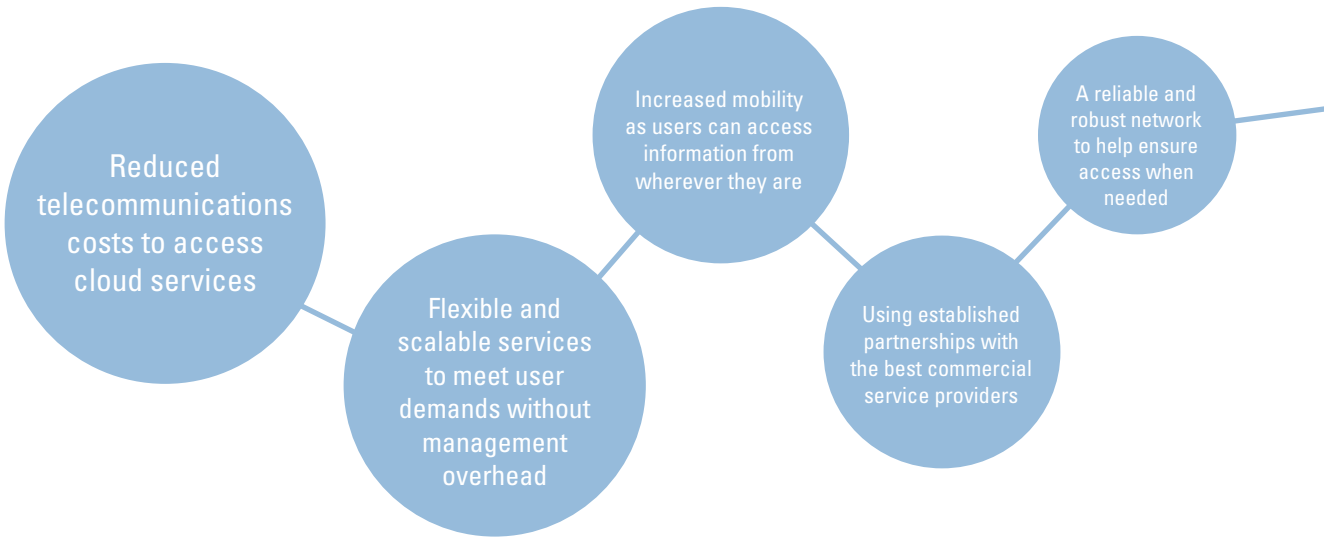
Over the ORION Network, peering and internet access are fundamental services that enable our users to efficiently accomplish their day-to-day activities. In order to help our users reduce their communications costs, ORION have direct connections with over 40 organizations.

Our connected institutions are continually requesting a growing number of additional services. Many of these are “cloud”- based, which require fast and reliable access through a world class network. This makes it a perfect choice for our users to connect to even more capabilities through ORION.

THE ORION NEBULA – Services in the Cloud

In response to our user's needs, ORION is proud to introduce the ORION Nebula – a collection of “cloud”-based services that can be accessed directly over the ORION Network. The ORION Nebula will provide solutions for online collaboration, digital educational content, hosting services, interactive content management, computing cycles, and vital data storage and access capabilities. Like the ORION Network, the ORION Nebula brings further unique capabilities to our research, education and innovation users.

In order to bring the best services to our users, ORION is working closely with Ontario's small, medium and large solution providers. These strategic business partners will be directly connected to the ORION Network wherever they might be in Ontario. Together ORION and its partners bring significant benefits to our users:



06

March 2006
ORION's AccessGrid server comes on stream.

Services

Over the last year ORION's services have grown from just peering and internet connectivity to a whole suite of services that our users have requested. The first phase of the ORION Nebula already includes an impressive set of services:





Video Sharing & Archiving

platform developed in conjunction with FileMobile to specifically meet our digital media community's needs for manipulation of rich media

Collaboration Tool of "O3 at ORION" as part of IGL00's platform

Peering with over 40 partners



Educational Content delivery from internationally known partners such as Desire2Learn and Learn360

Managed Hosting of data applications with Radiant, or on ORION's own servers for small applications

ORION is in discussions with a host of world-class service providers, including looking to connect already existing cloud offerings from the likes of Microsoft, Google, IBM, Bell Canada and HP. And if our own connected institutions have developed their own clouds, we can add them to the network and make their services available to the other organizations on the ORION Network.

Services

O3 at ORION

ORION's unique service offering is its "O3 at ORION" research collaboration tool. In partnership with IGLOO (a Waterloo-based company), O3 at ORION now serves over 3000 users in more than 120 Ontario-based research and education groups with a private, secure digital space that enables them to share information and collaborate on a diverse set of projects.

Each O3 at ORION group space is equipped with a suite of tools, including blogs, document sharing, discussion forums, photo galleries, wikis, calendars, and the ability to embed other content, including YouTube videos, Wordpress blogs, Flickr photo streams and Twitter feeds.

O3 at ORION is only a subset of the full IGLOO platform, and we have plans to expand it to an even more exciting R&E service. And since IGLOO is already connected to the ORION Network, our institutions can also partner with them directly to develop their own commercial-grade collaboration system tailored to their own organization. What was once a simple ORION-started collaboration tool can become a critical operational service offered through the ORION Nebula.



"I am not aware of any other platform that has such a comprehensive set of social media tools. The document repository, the wiki and the messaging features are of special interest to us. Of particular utility is the ability to form groups in our ResearchImpact community to provide filtered permissions to different parts of the community or to different documents and articles in our O3 community."

- David Phipps, Director, Research Services and Knowledge Exchange, York University

"O3 has been a valuable new tool for connecting our researchers and their partners," says Krista Jensen, Knowledge Mobilization Officer at York University's Office of Research Services. "It has also given our team a new way to mobilize knowledge across groups and helped turn research into action."

06

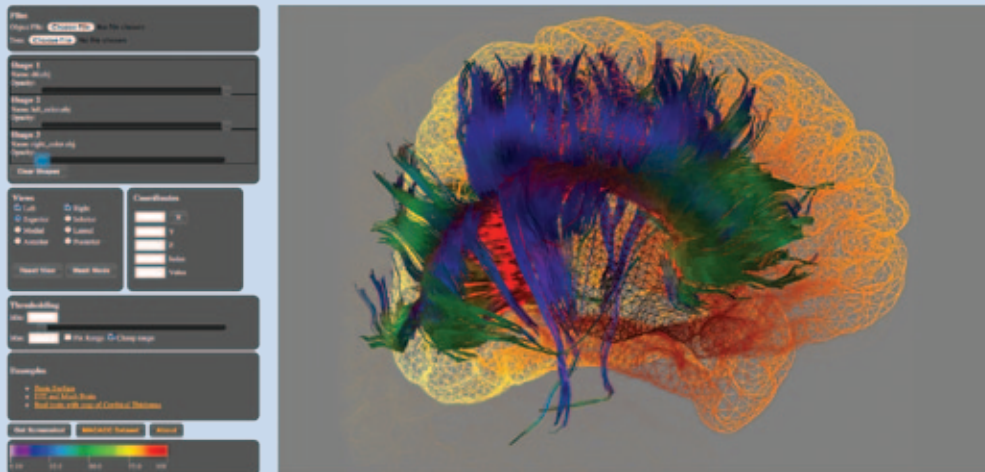
June 2006

ORION begins core network upgrade and is among the first in the world to deploy Nortel's next-generation ROADM technology, linking to hubs in New York City and Chicago.

Connecting scientists to the leading edge CBRAIN platform

Success Story

ORION Network 'critical infrastructure' in enabling transmission of data



"We are transferring hundreds of gigabytes of information from Baycrest to McGill and outwards," says Dr. Stephen Strother, senior scientist at Baycrest's Rotman Research Institute and Principal Investigator with CBRAIN. "What we do would be very difficult without ORION."

The CBRAIN project was created as an initiative to develop a pan-Canadian network of the five leading brain imaging research centres in Canada. The goal was to develop a Canada-wide platform for distributed processing, analysis, exchange and visualization of brain imaging data. All of which is made possible via the ORION Network with support from its CANARIE connections.

Leveraging the ORION Network, CBRAIN is also linking researchers to Compute Canada's High Performance Computing Centres (HPC). As a result researchers are able to access availability at various HPC centres without having to register with each individual site. Through linking to the CBRAIN platform via the ORION Network, researchers are able use a highly efficient system of data transmission.

In conjunction with the CBRAIN platform, the ORION Network is enabling Dr. Strother and his collaborators to focus on advancing an understanding of brain functions. Remarking on the efficiency of available technology, Dr. Strother says: "Our team of researchers is able to focus on improving cognitive development of the aging population."

06

August 2006

ORION partners with MaRS Discovery District to multicast XVI International AIDS Conference to global research networks.

What are you saying about ORION?

ORION supports the information layer of Ontario's innovation system. This support is comprised of a leading edge, robust backbone that enables the demanding data driven work required by today's innovation, coupled with connectivity among a diverse range of contributors across Ontario – from students and researchers to businesses and other connecting organizations, and linking this system to peer networks outside the region. This combination of critical infrastructure and connectivity makes rich collaboration possible, and positions us well for the future.

- Dr. Ilse Treurnicht, CEO, MaRS

We are all working and competing in a world where our success and future prosperity rests on our ability to innovate. Through our research and teaching at York University we strive for innovation that makes a difference and ORION is a critical part of our innovation infrastructure. With our connection through GTAnet into ORION, York's students, faculty and researchers can reach and share resources and communicate and collaborate with partners throughout the province, Canada and the globe.

- Bob Gagne, CIO, York University; President, CUCCIO

The true value of ORION is its ability to support and sustain that kernel of an idea that starts in one direction and then grows in another. Knowing that research is being supported by such a fundamental and powerful technology lets the imagination run wild and try new things.

- Dr. Mike Duncan, Chair, Visualization Sciences, Niagara College; ORION Award winner

06

November 2006

The Northern Ontario School of Medicine (NOSM) makes use of ORION's multicasting capabilities to collaborate with California's Stanford University School of Medicine in the new iAnatomy initiative, which allows students to view and manipulate hyper-realistic tissue objects using advanced 3D stereoscopic equipment over ORION, CANARIE and California's CENIC network.

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ORION plays a valuable role in Ontario. It improves the delivery of higher education by strengthening the collaboration between colleges and our partners in business and industry.

- Linda Franklin, President & CEO, Colleges Ontario

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07

May 2007

ORION network expands from 4,300 km span to 5,800 km across Ontario, with new segments from North Bay to Peterborough and from St. Catharines to London, providing increased back-up and reliability.

07

November 2007

Total backbone traffic over ORION exceeds 5 Gbps, a six-fold increase from the 825 Mbps in network traffic in 2005, making ORION one of the largest and fastest-growing R&E networks.

High Performance Computing and High Performance Networking are essential for research and innovation. The collaboration between ORION and Compute Canada provides a competitive advantage to Ontario's researchers by giving them the full range of tools and support necessary to continue to be world leaders in their fields, to create knowledge, and to contribute to the wealth and well-being of all Canadians.

- Susan Baldwin, Executive Director, Compute Canada

ORION continues to provide value in advanced networking regionally, in support of the members and regional advanced networks that use and rely upon ORION every day. ORION is a valued partner in growing Ontario's advanced networking and collaboration footprint, and we continue to work closely with ORION in evolving opportunities to support research, innovation and teaching environments.

- Todd Sands, Exec Director, WEDnet / CSCI; ORION Award winner

ORION provides the first class service that keeps the network operating smoothly; plans for growing demand; and provides the crucial connectivity that ties together instruments, data and computing resources into the digital infrastructure that is necessary for Ontario's researchers to compete.

- Dr. Hugh Couchman, Sci Dir, SHARCNET

08

August 2008

ORION and Michigan's Merit network install a 6km 1Gbps wireless backup link across the water between Sault Ste. Marie, Ontario and Sault Ste. Marie, Michigan

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ORION has implemented one of the most advanced, high speed fibre systems available in the market in order to facilitate collaborative research, virtually unrestricted by the network. Having this broadband foundation further solidifies Canada's position as a world-class location for research.

- Alex Giosa, President, Alcatel-Lucent Canada Inc.

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08

November 2008

ORION finalizes a major upgrade to fully support MPLS (Multi Protocol Label Switching) across the entire network

09

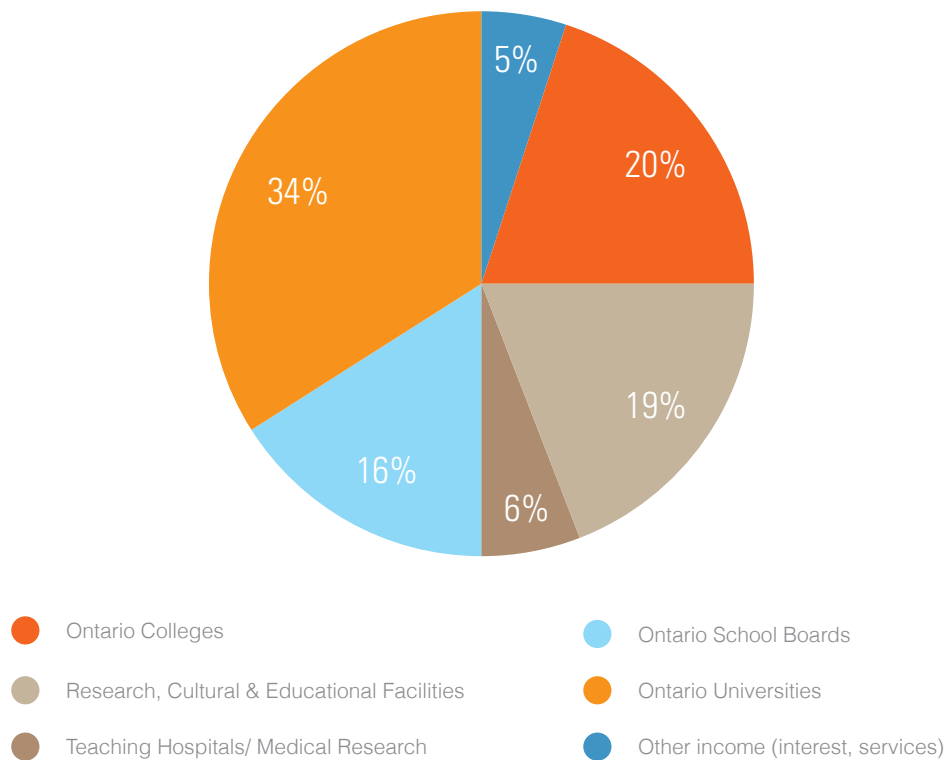
October 2009

ORION launches O3 Collaboration, an online collaboration platform for Ontario's research and education community

Financials

As we wrap up another year of being operationally self-sufficient, ORION continues to realize an increase in revenue of 5%, all while efficiently managing the growing utilization of the network of 50% year over year. ORION realized greater expenditures in 2011 with the investment in the deployment of the world's first R&E 100 Gb/s network. ORION continues to invest in solutions to strengthen the footprint, accessibility and reliability of the network which continues to attract new members. ORION is pleased to be connecting such a wide breadth of institutions representing a well balanced portfolio across Ontario's R&E sectors, all working towards advancing Ontario's innovation strategy.

2011 ORION Revenue (3.9 Million)



10

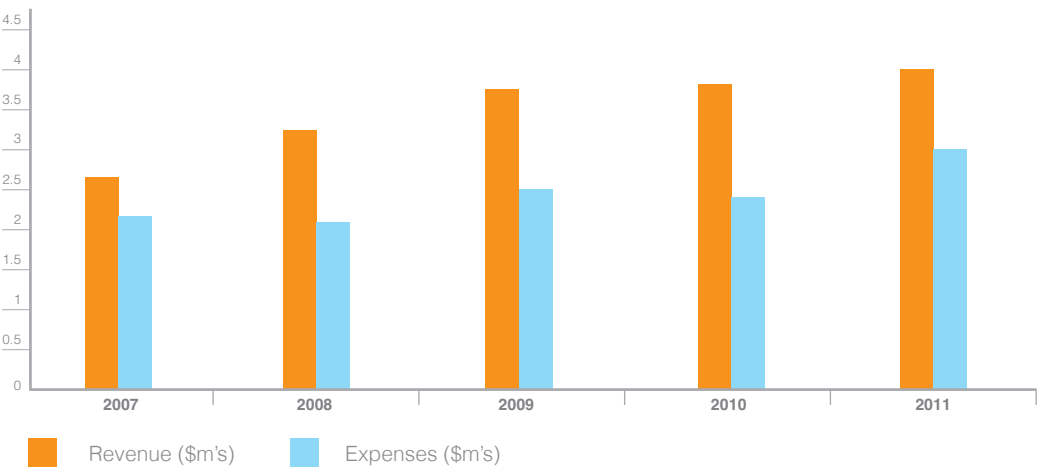
May 2010
ORION launches Canada's first R&E backup storage service

10

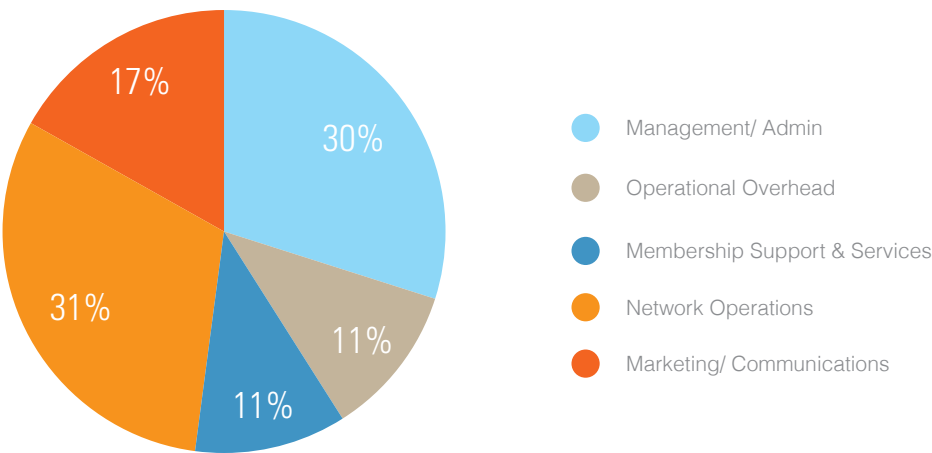
June 2010
ORION teams up with LEARN360 to bring faster, higher-quality HD educational content to connected schools

Financials

ORION Revenue and Expenses



ORION 2011 Expenses (3 Million)



10

September 2010
More than one million K-12 students in Ontario schools are now connected to ORION

March 2011
ORION turns up first operational 100G
segment, becoming the first R&E network
in the world to deploy a 100G production
network to support research and education

Chair

Anne Sado

President
George Brown College

Directors

Lisa de Wilde

Chief Executive Officer
TVO

Sara Diamond

President
OCAD University

Brian Down

Consulting Principal
Hewlett Packard

Dr. Khaled El Emam

Canada Research Chair, Electronic Health Information
Associate Professor, Faculty of Medicine
University of Ottawa

Dr. Alan George

Associate Provost, Information Systems & Technology
University of Waterloo

Dr. Darin P. W. Graham

President and CEO
ORION

Terry Mosey

Past Executive Vice-President
Bell Canada



We encourage you to share your feedback with us by emailing us at info@orion.on.ca, or by sending us a tweet [@ORIONNetwork](https://twitter.com/ORIONNetwork). You can also scan the QR code on the left to access a full directory of ORION staff.

ONTARIO RESEARCH AND INNOVATION OPTICAL NETWORK

360 Bay Street, 7th Floor
Toronto, Ontario M5H 2V6

Tel: (416) 507-9860
Fax: (416) 507-9862

Email: info@orion.on.ca
Web: orion.on.ca