



For immediate release
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ORION traffic tripled over last three years ***Massive spike in research and collaboration on provincial research network***

STRATFORD – ORION today reported phenomenal growth in the Ontario research network's traffic, pointing to expanding activity and applications, ranging from cancer and medical research, advanced technologies in the classroom, to global science collaborations.

Reporting from the Canada 3.0 conference in Stratford today, ORION President and CEO Phil Baker says ORION traffic has tripled over the last three years. "We're seeing an astounding growth in the use of our network across Ontario," he says.

"That's consistent with what Canada 3.0 delegates are hearing at the conference, with predictions of massive growth in the use of network-enabled and collaborative technologies and applications," he said.

"We're now pushing over 15.6 gigabits per second in total backbone use, up from 11.4 Gbps just a year ago, according to ORION's Senior Director of Engineering and Network Operations Sam Mokbel, who is monitoring a 40% spike in total backbone traffic in the last year alone.

This amount of traffic is the equivalent to transmitting a 14-metre stack of textbooks every second, or streaming a full DVD movie every two seconds. It represents growing activity and ultra high bandwidth applications, such as advanced visualization, distributed computing, accessing new genomic databases and other critical resources and instruments.

"We anticipated that our rate of traffic would grow, but we did not expect that it would reach this level so quickly," says Mokbel.

That rate of growth follows a consistent pattern, growing more than threefold - 166 per cent since 2008 and nearly 1,000 per cent since 2006, with new institutions connecting to ORION and more sophisticated services and applications riding on the network.

ORION traffic data also show that the amount of traffic within ORION, which includes traffic among ORION user institutions and Internet and peering traffic within the ORION infrastructure, is also growing, reaching a high of over 13,000 Gbps in March of 2010, or 84 per cent of total traffic.

"That means our user institutions are increasingly collaborating, sharing resources and working together," he says.

The economic benefits are quite substantial, he says, noting that this traffic remains within ORION and outside the commercial Internet. "Collectively, our members are saving hundreds of thousands of dollars," says Mokbel, because of the intra-ORION traffic and direct peering with over 40 content providers, such as Google and Limelight networks.

ORION expects this rate of growth will accelerate, as colleges and universities, school boards and research institutions deploy increasing high bandwidth and web 2.0 resources and applications.

Ontario's growing role as a global research powerhouse, especially in bio and life sciences, is clearly contributing to steady increase in ORION traffic, says Baker. "We will continue to see this rate of growth over the next several years, which will continue to create jobs and generate significant economic benefits," he says, pointing to a recent PricewaterhouseCoopers LLP study on the economic impact of the ORION network, which indicates ORION contributes almost \$150 million towards Ontario's annual GDP and supports over 2,100 jobs.

The study projects ORION traffic could demonstrate even stronger growth over the next several years, "based on worldwide trends of increasing collaboration in research, the proliferation of e-education and increasing use of real time applications (i.e. visualization of data)."

Download the ORION traffic growth chart: www.orion.on.ca/news/pdf/ORIONTrafficChartMay2010.pdf.

About ORION

The Ontario Research and Innovation Optical Network (ORION) is Ontario's ultra high-speed research and education network. It links 1.7 million Ontario researchers, scientists, students, teachers and staff who depend on ORION for teaching and learning and to enable their research collaborations and discoveries in physics, cancer research, environmental science and technologies, social sciences and the humanities and multiple other disciplines. ORION links users and institutions to each other, and through CANARIE - Canada's advanced research and innovation network - to high-capacity research and education networks, partners and collaborators across Canada and around the world. Visit www.orion.on.ca.

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