



Purdy's Wharf, Halifax

### **The Perimeter Institute: At the edge of theoretical physics**

Established in 1999 by Mike Lazaridis, founder and Co-CEO of Research In Motion (RIM), the Perimeter Institute includes over 60 resident researchers dedicated to addressing foundational issues in current theoretical physics research. The current areas of cross-disciplinary research include: Cosmology, Particle Physics, Quantum Foundations, Quantum Gravity, Quantum Information Theory, and Superstring Theory.

### **NEPTUNE: A priceless view of our oceans**

The North-East Pacific Time-Series Undersea Networked Experiments (NEPTUNE) will be the world's largest cable-linked seafloor observatory. Canada is investing \$100 million to develop this facility which consists of an 800-kilometre ring of powered fibre-optic cable on the seabed over the northern part of the Juan de Fuca tectonic plate. Shifts in this tectonic plate are responsible for a full range of terrestrial and ocean processes.

NEPTUNE will expand the boundaries of ocean exploration and give researchers around the world a new way of studying and understanding our planet. NEPTUNE also brings the power of the Internet to the ocean environment through novel technologies that will transmit data to the world almost instantaneously. Through NEPTUNE, scientists around the world will discover more about the structure and seismic behaviour of the ocean crust, the nature of seabed chemistry and geology, ocean climate change and its effects on marine life at all depths, and the diversity of deep sea ecosystems.

### **Canada's Centres of Excellence for Commercialization and Research (CECRs)**

In 2007, the Government of Canada invested \$163 million to establish 11 new Centres of Excellence for Commercialization and Research (CECRs) across Canada. The objective of these CECRs is to move discoveries out of the lab and into the marketplace through partnerships between the private sector, academia, and the public sector in Canada. Four areas for commercialization of research are targeted: environmental science and technologies, natural resources and energy, health and life sciences, and information and communications technologies.