California, Canada Campuses Combat Greenhouse Gas Emissions with Green IT

San Diego, Oct. 27, 2008 — In one of the first efforts of its kind, universities in Canada and California are pledging to work together to reduce greenhouse gas emissions on their campuses while developing so-called ‘green cyberinfrastructure’ – information technology that improves energy efficiency and reduces the impact of emissions on climate change.

A Memorandum of Understanding was signed today by the University of British Columbia (UBC), the University of California, San Diego – both sustainability leaders – and Prompt Inc., non-profit corporation that fosters research and development, building university-industry partnerships to increase the competitiveness of Quebec’s information and communications technology (ICT) sector.

The MoU signing took place at the third Summit of the Canada-California Strategic Innovation Partnership (CCSIP), held Oct. 26-27 in Montreal.

“By pooling our knowledge, resources and best practices, Canada and the U.S. will be that much more able to contribute cutting edge research on climate change,” says John Hepburn, UBC Vice-President, Research.

“Moreover, this is a critical lead role that we’re taking to reduce energy consumption and greenhouse gas emissions from computer and telecommunications technologies within campus infrastructure.”

In the near term, the institutions agreed to develop methods to share greenhouse gas (GHG) emission data in connection with International Organization for Standardization (ISO) standards for information computer and telecommunications equipment (ISO 14062), as well as baseline emission data for cyberinfrastructure and networks (ISO 14064).

“Many universities are confronting the issue of global climate change with a new focus on sustainability,” said Art Ellis, Vice Chancellor for Research at UC San Diego. “This MoU creates a unique international partnership that will examine how cyberinfrastructure can be used in research universities to create carbon-neutral environments. We are committed to sharing best practices, and working together to realize the promise of our collaboration.”

“This collaboration will enable the development of industrially-relevant methodologies and technologies with broad application across the ICT sector,” says Charles Despins, President and CEO of Prompt. “Building on our mandate,” says Despins, “we aim to facilitate university-industry partnerships that will help translate ‘green’ research results into viable new commercial opportunities for companies in Quebec, across Canada and California. The outcomes of this partnership could help stimulate the commercialization of new IT products with reduced carbon footprint, enhance the branding of ICT as a ‘clean’ sector, and influence the development of new paradigms for this industry.”

“While the carbon footprint of high performance computing has risen because of huge growth in this area, networking and trends such as virtualization offer great hope that we can also be part of the solution,” said Bill St.
Arnaud, Chief Research Officer at CANARIE. “This MoU reinforces existing close links between key Canadian institutions and their counterparts in California, notably at UC San Diego, and we are hopeful that over time we will be able to extend the alliance to other universities in both countries.”

UC San Diego is represented at the summit by the California Institute for Telecommunications and Information Technology (Calit2). Calit2 Manager for Government Programs Development Jerry Sheehan will address the summit on Oct. 27, and participate in a panel discussion Oct. 28 on ICT opportunities to reduce global warming, during a one-day Green Next-Generation Internet Workshop, also in Montreal.

Background

UBC is one of Canada’s leading research-intensive universities with a strong commitment to sustainability research and practice. In the 2009 Green Report Card, UBC is the only university in Canada to earn an A- and one of just 15 schools to achieve that grade. In 2006, UBC’s Vancouver campus surpassed Canada’s 2012 Kyoto Protocol targets, having reduced greenhouse gas emissions by 25 per cent over a period of 16 years.

UC San Diego is a pioneer in distributed computing platforms such as the OptIPuter and CineGrid, and recently launched GreenLight, a project to build an instrumented datacentre to measure energy savings and CO2 reductions using different server configurations and software in a real-world environment. Simultaneously, Canada’s Green-Next Generation Internet (G-NGI) program, led by PROMPT to reduce global warming, is building a set of testbeds to develop the necessary protocols for testing, verifying and auditing carbon credits in compliance with ISO 14064 - protocols made possible through the application of next-generation Internet technologies.

The MoU stipulates that signatories will explore a system whereby “carbon offsets earned through a variety of GHG reduction mechanisms” would be traded between participating institutions in exchange for access to cyber-infrastructure resources, including, for example, grid computational cycles, wide area network bandwidth, other virtual services and even research funding.

Related Links

California Canada Strategic Innovation Partnership http://www.ccsip.org/
California-Canada summit on Green IT and Next Generation Internet http://www.ccsip.org/workshops.html
Prompt Inc. http://www.promptinc.org/