

Memorandum of Understanding

Between

University of California, San Diego (UCSD)

And

University of British Columbia (UBC)

And

PROMPT Inc. (PROMPT)

October 27, 2008
California-Canada Summit
Montreal, Canada

TITLE

This Memorandum of Understanding is between the University of California, San Diego (**UCSD**), the University of British Columbia (**UBC**) and PROMPT Inc (**PROMPT**). It is our intent to collaborate in defining a process for sharing information and best practices in the use of university cyber-infrastructure, research networks, and Information Computer and Telecommunications (**ICT**) technologies to reduce Green House Gas (**GHG**) emissions at universities and research centers. The parties hope that this initial collaboration will provide part of the basis for longer-term initiatives such as creating the world's first carbon trading system for universities, and identifying new research and business opportunities in the multi-disciplinary field of ICT and GHG accounting. However, participation in the collaborative work described in this MOU does not bind any of the parties to participate in or contribute resources toward these or other future goals.

PARTIES TO THE MEMORANDUM

The University of California, San Diego is one of the premier research universities in the United States and is committed to continued institutional leadership in the area of understanding, analyzing, and developing solutions to issues of global climate change. UCSD was recently rated 21st out of 300 colleges and universities surveyed by the Green Report Card, was the first University on the West Coast to join the Chicago Climate Exchange, and through the California Institute for Telecommunications and Information Technology, is host to the GreenLight Project for measuring climate impact of cyberinfrastructure.

The University of British Columbia (**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 1997, UBC became Canada's first university to implement a sustainable development policy. A year later, the university opened Canada's first Sustainability Office (SO). UBC is among hundreds of leading educational institutions that signed 1990's Talloires Declaration. These institutions pledged to make sustainability the foundation for campus operations, research, and teaching.

PROMPT Inc (**PROMPT**) is both a private corporation and a non-profit organization whose efforts are supported financially by the Quebec government and industry in the ICT sector. Its objective is to reinforce the Quebec innovation system and increase the benefits of public investments to research. Prompt's mission is to enhance the competitiveness of companies in the ICT sector through research partnerships with universities and Quebec public research centers. These research partnerships are jointly financed by the private sector, the Quebec government and the government of Canada. PROMPT has recently been building a Green Next Generation Internet initiative involving a large critical mass of domestic and foreign partners. (www.promptinc.org)

CONTEXT

The signatories to this agreement recognize that:

1. Global climate change is occurring and that society has a responsibility to address it;
2. Cyber-infrastructure, research networks, and information communication technologies are critical tools in helping North American universities and research centers reduce their GHG emissions;
3. Many universities throughout North America are moving toward carbon-neutral strategies either on a voluntary basis, or as part of a government mandate; and
4. UCSD, UBC and PROMPT wish to further promote their respective objectives by providing for appropriate collaborations and interconnections between their researchers, public sector organizations, and industry partners.

AGREEMENT

Therefore, UCSD, UBC and PROMPT agree as follows:

1. To explore and share best practices in reducing GHG emissions at their respective institutions and more specifically to develop methods to share GHG emission data for ICT equipment (ISO 14062) and baseline emission data for cyber-infrastructure and networks as per ISO 14064, either through a common registry or other means.
2. To strategically engage the appropriate national organizations in their respective countries toward securing resources that will support various instruments and test beds - such as UCSD's "GreenLight Project" and PROMPT's G-NGI - to enable measurement of ISO 14062 life cycle and ISO 14064 project baseline emission data.
3. To work with national funding bodies in their respective countries for the establishment of cyber-infrastructure programs to explore carbon reduction strategies enabled, either directly or indirectly, by new network and distributed computing architectures such as PROMPT G-NGI, OptiPuter and CineGrid.
4. To collaborate with appropriate wide area research networks to explore methodologies and architectures to decrease GHG emissions, including options such as relocation of resources to renewable energy sites, virtualization, etc.
5. To explore the potential for "virtual" carbon trading systems, whereby carbon offsets earned through a variety of GHG reduction mechanisms are traded between participating institutions in exchange for access to cyber-infrastructure resources (grid computational cycles, wide area network bandwidth, research funding and/or other virtual services.)
6. To explore the creation of a multi-sector pilot of a generalized carbon trading system including stakeholders from government, industry, and universities.
7. To collaborate with each other and with government agencies and departments and other organizations in their respective countries to promote and encourage other universities,

institutions and organizations such as EDUCAUSE, CENIC, Compute Canada, CANARIE, and CUCCIO to be additional signatories to this Memorandum of Understanding.

Agreed to By:

Dated at _____, this _____ day of _____, 2008.

For the UNIVERSITY of CALIFORNIA, San Diego (UCSD)



Arthur B. Ellis
Vice Chancellor - Research , University of California, San Diego

For University of British Columbia.

Ted Dodds
Chief Information Officer

For PROMPT Inc .

Charles Despins
President & CEO