Report on
US/Canada Plate Boundary Observatory (PBO) Workshop
Seattle Washington
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**Introduction**

The Plate Boundary Observatory (PBO) project is one of four elements of NSF Earth Science Directorate’s EarthScope MRE initiative being considered for funding beginning in FY 2003. A workshop was held in Seattle Washington on March 5 2002 to further cooperation between Canadian and American scientists in achieving the goals of PBO.

The workshop has two main objectives:

1. Information Exchange
   - Review of US experience in cooperation between crustal deformation & GPS survey communities
     - PANGA, UNAVCO, NGS, SCIGN
   - Current status of continuous GPS networks in Canada
     - Western Canada Deformation Array (WCDA)
     - Current and planned GPS survey community networks

2. Planning for Future Cooperation
   - Between US and Canadian investigators
   - Between Canadian crustal deformation & surveying communities

A meeting agenda is attached (Appendix A), along with a list of the 12 participants, 6 from each country (Appendix B).

**Action Items**

The following action items were identified to strengthen and promote Canadian efforts in support of the Plate Boundary Observatory project:

1. Joint Planning and Coordination
   The PBO program in the US and Canada will benefit from closely linked planning and closer coordination of activities. To facilitate this, a formal Canadian PBO Coordinating Committee should be established and the PBO Steering Committee should consider inviting a representative from this committee to future meetings. For the time being, an ad hoc committee consisting of the Canadian attendees to this meeting (chaired by H. Dragert) will fulfill this role.

2. US Contribution to Canadian Efforts
   It was deemed highly desirable for the US PBO effort to demonstrate its commitment to an international implementation of PBO by allocating resources for Canadian site installations at a suggested level of 20 continuous GPS sites and 1 strainmeter installation. Wayne Thatcher and/or Wayne Shiver will raise this issue with the PBO Steering Committee.
3. Current Windows of Opportunity in Canada

A number of organizations are currently (or will shortly) be involved in the operation of continuous GPS sites within western Canada. Those operated by Geomatics Canada already meet the criteria for PBO operations in terms of data quality and data delivery. Other sites such as those operated by B.C. Geomatics Services, the Canadian Coast Guard, or the University of Calgary may offer the opportunity to develop geodetic-quality sites at suitable locations with modest additional resources. The Geological Survey of Canada (H. Dragert) and the Geodetic Survey of Canada (M. Craymer) will initiate dialogues with these organizations to establish what opportunities exist and what resources are required to make use of existing infrastructure to increase continuous GPS coverage in western Canada.

4. Promote Canadian Support for EarthScope

US efforts to secure funding for the EarthScope initiative may be bolstered by the submission of letters of support from recognized scientific organizations within Canada. H. Dragert will approach the Canadian Geoscience Council (CGC) and the Canadian Geophysical Union (CGU) in order to add this item onto their agendas in their upcoming meetings. (The next meeting of the CGC executive will be in Vancouver on Apr. 27, and the annual CGU meeting will be held May 19 - 21 in Banff.)

The CGU meeting would also provide a timely venue to promote the EarthScope initiative to a cross-section of the geoscientific community within Canada. H. Dragert will investigate if it is possible to arrange for a presentation by a representative of the PBO Steering Committee to provide an overview of the EarthScope program at this meeting as well as to hold a Canadian PBO “working group” meeting at this time.

5. Formulation of a Canadian Initiative

The number of academic institutions actively involved in neotectonic studies is limited in Canada. Also, the structure of funding for large initiatives is significantly different. These two facts dictate that any PBO framework proposed for Canada have different underpinnings - specifically, any substantive Canadian GPS initiative will likely benefit if it is nation-wide and if it has industry and provincial involvement. To that end, it is worthwhile to investigate the formulation of a submission to the Canadian Foundation of Innovation (CFI). H. Dragert will initiate contacts with potential academic, provincial, and industry partners as well as federal departments with a vested interest in state-of-art geomatics within Canada in order to establish core participants who could take this forward. It should be noted that CFI will provide funding for up to 40% of project costs and under such a formula, US contributions (point 2 above) would wield considerable leverage for CFI funds.
Appendix A
PBO US/Canada Workshop
Seattle 05 March 2002

9:00 am Welcome & Introduction to Workshop (Dragert; all attendees introduced)

9:15 am Plate Boundary Observatory--Overview, Goals & Status (Thatcher)

Experience of US Cooperation Between Surveying & Crustal Deformation Communities on Continuous GPS Networks

9:30 am Deformation Monitoring & Survey Community Cooperation in WA (Qamar)

9:45 am UNAVCO Activities & Perspective (Shiver)

10:15 am Questions & Discussion

10:30 am COFFEE BREAK

10:45 am National Geodetic Survey CGPS Role (Snay)

11:15 am Questions & Discussion

11:30 am The Southern California Integrated Geodetic Network (SCIGN) Experience in Collaborating with Surveying Community (Hudnut)

NOON Questions & Discussion

12:15 pm LUNCH BREAK

Continuous GPS Activities in Western Canada

1:15 pm Crustal Deformation Monitoring for Earthquake Research (Dragert)

1:45 pm Questions & Discussion

2:00 pm Continuous GPS Operations, Objectives, Involvement, Potential for Collaboration (Round Table Informal Presentations & Discussion)

Michael Craymer, Geomatics Canada, NRCan
Sun Wee, Canadian Coast Guard, DFO
Susan Skone, Dept. of Geomatics Engineering, Univ. of Calgary
Patrick Fenton, NovAtel Inc.
Amin Kassam, Geo-Spatial Reference, B.C. Ministry of Sustainable Resource Management

3:15 pm COFFEE BREAK

3:30 pm Recommendations, Actions Items, Next Steps
4:30 pm  ADJOURN
Appendix B

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