



CANARIE Users' Forum 2009

A Report on the Proceedings

CANARIE's third forum was held in Banff, Alberta from the evening of Thursday, October 15th and the afternoon of Friday, October 16th. Sixty-nine users from right across the country reflecting the breadth of the Canadian research community attended CANARIE Users' Forum 2009. Users included university CIO's and other technical staff; regional compute consortia executive and technical staff; researchers from a variety of big science projects in the country; researchers associated with CANARIE's NEP funded projects; representatives of private industry; and representatives of the regional optical networks.

The forum was co-located with the Cybera/CANARIE Summit, OGF 27, IEEE Grid 2009, and meetings of other groups including Compute Canada, CUCCIO, and West Grid. Co-location of the forum with these other events was prompted by a recommendation from Users' Forum 2008 that the 2009 forum should strongly feature international technological innovation particularly the integration of advanced networks with other elements of e-research and innovation. Accordingly, CANARIE took advantage of the presence in Canada of a number of international experts and practitioners in e-research and cyberinfrastructure to bring international focus to this year's event. Attendees at Users' Forum 2009 were encouraged in advance to attend as much of the week's events in Banff as possible.

Before attending the forum, attendees had the opportunity to hear from, among others:

- Andrea Donnellan, Jet Propulsion Lab, NASA
- David Wallom, e-Science Program Manager, Oxford
- Steven Newhouse, Acting Technical Director, European Grid Infrastructure
- Rich Wolski, Eucalyptus
- Manish Parashar, Office of Cyberinfrastructure, National Science Foundation

- Bill Appelbe, CEO and Chief Scientist, Victorian Partnership for Advanced Computing
- Anthony Williams, Coauthor, Wikinomics: How Mass Collaboration Changes Everything.

Forum participants were also able to attend sessions on topics related to all aspects of grid computing, cloud computing, data management and distribution, middleware, and developments in virtual communities in diverse disciplines akin to CANARIE's own NEP programs.

In preparation for Users' Forum, CANARIE staff reviewed the feedback from Users' Forum 2007 and 2008. Staff also convened an ad hoc advisory committee drawn from a representative sample of attendees in the two previous years. A conference call was held with that committee to review a draft agenda. The committee made a number of suggestions that were incorporated into the 2009 agenda. The attendees on that conference call are listed in Appendix 3.

Another strong recommendation coming out of Users' Forum 2008 was that users' forums contain greater opportunities for discussion among attendees. Accordingly, presentations at Forum 2009 were kept to a minimum:

- Dieter Kranzlmüller of the European Grid Infrastructure spoke before dinner on Thursday evening followed by a focused discussion led by a table host in groups over dinner and a brief report back to the whole forum. (Dieter's slides are attached as Appendix 4 and a list of the table hosts is attached as Appendix 5.)
- Hélène Joncas, CANARIE's Chief Strategy Officer, gave a short presentation on Cyberinfrastructure for Canada as it has been under discussion among CANARIE, CUCCIO, and Compute Canada. (Hélène's slides are attached as Appendix 6)
- Walter Stewart, CANARIE's Senior Advisor e-Research and forum facilitator led a panel of three senior representatives of research, government funding, and university administration:
 - Robert Davidson, Director Programs and Planning, CFI
 - Jonathan Schaeffer, Vice Provost and CIO University of Alberta
 - Randall Sobie, Institute of Particle Physics Research Scientist and Adjunct Professor, University of Victoria

The panel was followed by 90 minutes of discussion in the same table groups as the evening before. Table hosts were asked to ensure that the discussion remained focus. To assist in that discussion, table hosts were provided with a list of questions for both the Thursday evening and Friday morning discussions. Although the discussion was significantly focused on responding to what attendees had heard from the international speakers and conference registrants, the questions for discussion provided to the table hosts included the more

general question: “What three points would you want to make to CANARIE and the ORANS as they continue their work to plan for future networking in Canada?”

Following the table discussions, each table reported back to the whole forum. Users’ Forum 2009 concluded with Guy Bujold and H  l  ne Joncas giving the attendees a summary of what CANARIE had heard at Users’ Forum 2009 and thanking them for their valuable contributions to CANARIE’s on-going planning.

Findings from CANARIE Users’ Forum 2009

All table discussion groups were seized on the necessity of advancing the cyberinfrastructure agenda in Canada and doing so with a sense of urgency. There were many opinions of how such an agenda might be advanced. There were no dissenting voices either to the necessity or to the urgency. On the contrary, the forum asserted that by Users’ Forum 2010 there must be decisive progress in the creation of the vision and the development of an implementation plan.

The comments from the groups might be summarized under the following categories:

1. Vision
2. Leadership
3. Process
4. Stakeholders
5. People

Vision:

- Discussion groups called for a vision for cyberinfrastructure in Canada that afforded the kinds of functionality available to European researchers, but that was adapted to meet Canadian circumstances.
- The achievements of existing groups, including CANARIE, in building elements of Canadian cyberinfrastructure must be acknowledged. Those achievements must be foundational in the creation of true infrastructure.
- The groups recognized that whether desirable or not, such vision was unlikely to come from government and would have to come from stakeholders from multiple communities coming together.
- A vision that is truly comprehensive of all elements of cyberinfrastructure including networks; compute and visualization resources of diverse kinds; middleware; resources for data ingest, analysis, curating, and storage; specialized instrumentation; and above all the people to develop, manage, and evangelize the use of cyberinfrastructure is critical.

Leadership:

- As in Users' Forum 2008, forum attendees called on CANARIE to provide facilitative leadership i.e. to convene the stakeholders and get the consultative engagement process to develop a Canadian vision underway. CANARIE was not asked nor did CANARIE volunteer to become responsible for cyberinfrastructure in Canada. The request was for CANARIE to get the consultative process underway.
- CANARIE was urged to work beyond the current mandate to ensure success.
- CANARIE was seen as catalyst and co-ordinator.
- CANARIE has the track-record and reputation to enable layers of people to work together.

Process:

- The forum was singularly united in a call for CANARIE to convene a multi-stakeholder panel to develop the CI vision for Canada in a process akin to that used by the HPC community to develop a long range plan earlier this decade.
- The forum was united in a call for the panel to begin its work in a matter of a very few weeks.
- Wide consultation is absolutely essential.
- The draft vision should be completed by the fall of 2010 with consultations to occur throughout the fall with a final report by the end of the year.
- Users' Forum 2010 might well be devoted to resolving the vision.

Stakeholders:

The following were identified as stakeholders to be either represented on the panel or to be consulted:

- CANARIE
- The ORANs
- Compute Canada
- Regional compute consortia
- CUCCIO
- Government S&T representative(s)
- Funding Agencies
- Industry
- Foreign expert advisor
- Research communities
- Educators

People:

As powerful as was the support for the development of a vision for cyberinfrastructure in Canada, so too was Users' Forum 2009 seized across all groups of the necessity of major investments in people. Informed by the contrast between the major investments being made in people related to CI in Europe, the United States, and Australia and the paucity of such investment in Canada, forum participants strongly enunciated need for a more balanced funding structure in Canada between capital and operating funds. Attendees who also attended earlier events in the week were particularly impressed that the Australian government has now acknowledged that people and their support is a critical component of building any sort of infrastructure.

People support is critically required in the following areas:

1. Technical support staff to ensure the elements of CI run optimally
2. Technical support to users in making use of the elements of CI in their research.
3. Evangelists who work with the research communities to demonstrate the possibilities afforded by CI
4. Middleware developers
5. Support for the development of virtual communities to develop plans to deploy and share resources.
6. Educators who will develop means to orient next generation participants to the possibilities of CI.

Currently Canada's elements of CI run on minimal staff support which although low in cost, results in far less than optimal use of the resources.

Users' Forum 2009 spoke strongly about the need to integrate CI into the curricula of K-12; college, under-graduate, graduate, and post-graduate programs in order that future generations are fully CI literate. Such considerations about education need to be fully incorporated into any Pan-Canadian vision for cyberinfrastructure.

Conclusion:

Users' Forum 2009 gave CANARIE a strong vote of confidence and a strong mandate to provide facilitative leadership to getting the development of a widely supported vision for CI in Canada underway. This mandate is all the more impressive because of the diversity and the cross-country reach of attendees at the forum. There has never been a more compelling statement of the importance and the urgency of moving the cyberinfrastructure agenda forward in this country. User Forum attendees were quick to acknowledge the work of many around the country who have laboured mightily to bring forth elements of what could be CI. But all acknowledged that in integrating those elements and filling gaps to create an integrated infrastructure for 21st century infrastructure for research and

development, Canada is lagging its competitor countries and must first catch up and second use the insights gained from others' experience to surpass those countries. CANARIE has been identified as a key player in getting the process started.