

Multicasting for geographical education

Report to the Research and Education Advanced Network New Zealand (REANNZ)

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Travel award

In December 2006 I was awarded a Travel Award from the KAREN Capability Build fund. The award was to support my travel to London and Tunis (as the focus) for the development of a research in geography and geographical education. In geography my main interest is in the use of KAREN for grid computing, and in geographical education my focus is on the use of KAREN for AccessGrid (and EVO) virtual meetings. I completed my supported travel in early June, 2007, and the balance of the time on the project has been committed to building the network and KAREN interest at the University of Waikato.

The traveling part of my project took me initially to London where presented a conference paper to a meeting of the IGU Commission on Geographical Education in early April. The paper entitled *Multicast Broadband and Research Collaboration in Geographical Education* was printed in the IGU/Herodot Conference Proceedings (pp. 62-68). This presentation enabled me to identify colleagues in two key institutions in the research network in the United Kingdom, the Institute of Education in London, and the Herodot Community at Liverpool Hope University.

Tunisia was the focus of my travel, given that the International Geographical Union is scheduled to meet there on 12 -15 August, 2008. The purpose of the visit was to establish whether the international conference venue (Le Kram Conference Centre in Tunis) could provide the bandwidth and conference facilities to support a multicast presentation. The World Summit on the Information Society (WSIS) meeting had been held there in November 2005, and the Secretary General of the IGU Congress, Professor Ali Toumi, was able to give me a conducted tour of the facilities and to negotiate availability of the required technology. I have lodged a request for the demonstration and use of these facilities on behalf of our research network.

I returned to New Zealand via Canada in May. My target was a group of research colleagues at the University of Guelph in Ontario. I spent some time working with staff in The Shared Hierarchical Academic Research Computing Network (SHARCNET), and have since established AccessGrid connectivity with the University of Guelph.

Extension of activities

Since my return from the visit to Tunis, I have worked to extend the network potential. I propose a major presentation with Michael Solem (US) at Tunis, and have funding for Michael to visit New Zealand in November 2008 to run a virtual conference on communities of practice using multicast facilities. I have also learned the basic operating protocols of AccessGrid and have started to explore the use of EVO so that I can provide documentation for key members of the geographical education network.

At the KAREN conference at the University of Waikato on 17 October I made a presentation focusing on the use of a desktop system for AccessGrid. The presentation ran the RIKS Lobster model in S Block at Waikato, with links to/advice from colleagues in K Block at Waikato, Lincoln University, Canterbury and the Central University in Queensland. Professor Roger White from the Memorial University in Newfoundland was an academic visitor to the University of Waikato in late 2007, and he will extend the use of (lobster) modeling in an AccessGrid presentation in December.

On the basis of this project I undertook to develop the University proposal for expanded provision and use of multicast services on the campus of the University of Waikato. Waikato plans to complete the construction of a second small conference room in 2007 and has a prototype desktop system running and documented for small research teams. The desktop system was used for a recent RSNZ meeting. In 2008 the major development of a purpose built conference facility for up to 24 participants is likely to be undertaken. The plan is for two further distributed facilities to be provided on campus in 2009.

I am aware of several 2007 awards from the Capability Build fund. With reference to *High Quality Video Conferencing for Advancing Collaboration Capabilities in Access Grid Environments* at the University of Canterbury, my interest is in the effective capture of AccessGrid sessions for subsequent analysis. I attended the first two days of the GEON meeting at the University of Auckland on 1-3 December, and joined the meeting via Access Grid on day three. My grid computing interests provide links with *Using High Resolution Satellite Imagery for Spatially Integrated Poverty Mapping* (Gibson) and *GeoSciences Network – New Zealand Establishment* (Cooper).

Summary

The KAREN award enabled me to move from initial interest towards the “proof of concept” with a significant research group. I plan to continue this work with a formal commitment to the International Geographical Union for the 2008-2012 Commission. I will also provide a item for the Karen Newsletter on issues in building international research collaborations using multicast. I am grateful for the travel award and the enablement provided. I am also grateful for the support of colleagues in the various institutions with which I have worked.

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