Regional Centre of Expertise on Education for Sustainable Development
Web-Based Networking Structure
Final Report to the University of Regina *Technology Innovation Fund*
Friday, December 1, 2006

Overview
On February 13, 2006, Information Services at the University of Regina awarded $1600 through its *Technology Innovation Fund* to help create a Web-Based Networking Structure for a proposed Saskatchewan Regional Centre of Expertise on Education for Sustainable Development (SK RCE on ESD). The United Nations University (UNU) as part of the U.N.'s Decade of Education for Sustainable Development (2005-2014) is globally identifying Regional Centres of Expertise (RCEs) to advance the educational goals of the Decade. A proposal to formally establish a SK RCE was submitted to the UNU on August 2, 2006. This followed one year and a half of extensive consultation with members of the University of Regina (including its federated colleges), the University of Saskatchewan, SIAST, and diverse organizations in the communities of Craik, Regina, and Saskatoon. Approval of the SK RCE proposal by the UNU is expected in December, 2006, when applications are to be reviewed. A general description of the UNU RCE initiative is available at:
    http://www.ias.unu.edu/research/details.cfm/ArticleID/466/search/yes
A central interest of organizations participating in the Regional Centre of Expertise was to create a Web-based structure that would enable knowledge sharing and networking among regional ESD participants and between established RCEs globally. The SK RCE Web-based networking structure that has been developed is found at:
    http://142.3.35.7/

Names of participants and academic units
The following individuals were part of the original proposal to the Technology Innovation Fund and the development of the SK RCE proposal to the UNU and/or members of the SK RCE Technology Group (RTG members are marked with an '*'). The RTG has provided ongoing oversight of the development of the SK RCE Web-based networking structure. Tim Maciag, a doctoral student in the Department of Computer Science at the University of Regina was hired to in June, 2006, to develop the site under supervision of the RTG.
- Roger Petry*, Philosophy, Luther College (project lead and contact person)
- Lyle Benko, Education (retired)
- Alec Couros*, Education
- Tanya Dahms, Chemistry and Biochemistry
- Keith Fortowski*, Coordinator of Institutional Research, Resource Planning Office, U of R
- Daryl Hepting*, Computer Science
- Tim Maciag*, Doctoral Student, Computer Science
- Dena McMartin, Engineering
- Curt Schroeder*, Faculty Trainer, SIAST Wascana Campus

Additional Contributions:
In addition to the $1600 contributed by the *Technology Innovation Fund* and the time commitments of participants listed above, the following additional in-kind and financial contributions were made to the project:
- Student Employment Experience program of the Government of Saskatchewan to hire a student to work on this project commencing in June 2006. ($4666 total; $1166 from Luther College and $3500 from the Government of Saskatchewan). This employed a doctoral student for 269 hours @ $17.30/hour.
- Hardware to host the SK RCE Web site provided by Luther College (1.25 Ghz Athlon Processor, 1 GB RAM, 180 GB HDD, DVDRW)
- Free/Open Source Software used in the project (Ubuntu GNU/Linux distribution for the notebook computer and server; Drupal Content Management System for the SK RCE Web-Based Networking Structure)
- Office and meeting space (Centre for Academic Technologies Board Room used for RTG meetings; Office space at Luther College provided for student and server as well as meeting space provided for SK RCE steering group)
- Coordination of usability testing (including recruitment of volunteers) by SIAST Wascana Campus

2006 Project Milestones

February: Purchase of the following hardware through the Technology Innovation Fund totaling $1,556.81:
Notebook PC ($1320.14): Acer TM4202WLMi Intel Core Duo Processor, 1.66 Ghz, 802.11a/b/g Wireless, 15.4-Inch WXGA, 1GB DDR2, 100GB HDD, DVDRW, Windows XP Pro
Notebook Accessories ($236.67): Notebook Case (TAR-CTM500 TRADEMARK UNIVERSAL CASE), Ergonomic Wireless Desktop (MOUSE-WRLS OPT DSKTP PRO V2.0 CD), Desktop Microphone (LOGITECH), Retractable Head Set (RAI-PODIO)

March: Installation of dual boot system (Ubuntu GNU/Linux & Windows operating systems) on notebook

May: Development and posting of Student Employment Experience Advertisement (Posted May 3; Closing Date May 17); Development of RCE Student Employment Experience interview questions and shortlisting of candidates by RTG; candidate interviews (May 26 and May 31).

June: Hiring of Tim Maciag, Computer Science doctoral student, by Luther College and development of Intellectual Property Open Licensing Agreement for project (June 2); RTG Meeting (June 7): initial project orientation with student tasked to identify top two or three content management systems (CMSs) for project with relevant strengths/important features highlighted; RTG Meeting (June 21): Student reviewed 8 CMSs with recommendation of top 3 (Joomla, Drupal, and Plone; decision subsequently made to adopt Drupal); identification of priority functionalities to be implemented (discussion boards/forums, Blogging space, Wikis, Email (mass mailer), event and information posting, file/resource sharing, search functions).

July: Ubuntu Linux server installed on computer hardware provided by Luther College; Drupal installed along with the following initial functions enabled: blogs, book page (for collaborative writing efforts), forum function (i.e., bulletin board), polls, and story function; RTG Meeting (July 26): review of features installed, discussion of site membership criteria and structure needed for SK RCE's 8 regional committees.

September: RTG Meeting (September 14): Review of features to date, account creation, and Web site appearance. Discussion of procedure for usability testing of site.

October: Development of questions for usability testing by Curt Schroeder of SIAST with RTG input; usability testing by SIAST of 17 identified tasks by 5 individuals (conducted week of October 16); RTG Meeting (October 20): Review of results of usability testing; discussion of possible means for collaborative documentation.

November: Meeting of SK RCE Steering Group (Nov. 15): presentation of SK RCE Web-based networking structure; discussion of SK RCE celebrations for March 1&2, 2007; review of SK RCE structures.

December: RTG Meeting (December 1): Review of final project report to Technology Innovation Fund and next steps (e.g., policies for site, further technological applications for SK RCE).

Outcomes addressing issues of sustainability and innovation

- Web-based networking structure completed within time-schedule; tailored to structural needs of SK RCE and ready to facilitate work of SK RCE regional structures upon UNU approval. Ongoing experimentation by RTG with communications technologies for further enabling virtual meetings by groups (e.g., Skype).
- Capacity for posting SK RCE events, facilitating collaborative work at a regional level, and hosting content (e.g., education for sustainable development (ESD) resources, curricula, research papers, photographs of projects, maps of region, working group collaborative documents including meeting minutes)
- Student employment and expertise of RCE Technology Group able to maintain SK RCE Web site over longterm; minimization of costs through use of Free/Open Source Software tools and in-kind contributions.
- Sharing methodology with other RCEs globally enables mutual learning and emulation of SK RCE technological approach. As of September, 2006, the SK RCE was unique among RCE's using this technological approach as part of its plan. Interest also expressed by Simon Fraser University.
- Project's documentation enables subsequent published research into how RCEs can use technologies to enable their regional structures as well as limitations of these technologies.
- Publicly available portal for information about ESD projects and research in the region (i.e., corridor between Regina and Saskatoon including both centres and communities along Highway 11).
- Project complimentary to University of Regina research in education and sustainable development (e.g., climate change, health, sustainable infrastructure including water and energy, cultural sustainability) with emphasis on information technology (one of 5 strategic emphases of the University).