

Building a Distributed Community Data Management Network for Local and Traditional Knowledge

Amos Hayes and Jean-Pierre Fiset

For more than a decade, the Geomatics and Cartographic Research Centre (GCRC) at Carleton University has been developing theory and practical technologies to support data management and dissemination with a strong focus on cultural context. Recent work on a number of community-led interactive atlases and International Polar Year projects have highlighted challenges in organizing, representing, and ensuring the preservation of knowledge in digital form without affecting the control and possession of the information by communities themselves. Communities have expressed a desire to be able to host and grow these digital collections within the community while recognizing that longer term preservation may be better achieved by partnering with regional or territorial governments, knowledge centres, or even other communities with sufficient technical capacity.

To attempt to address these concerns, the GCRC has designed and is part-way through the deployment of a pilot distributed data management system where each participant community, region, or organization hosts a node comprised of flexible data storage, an interactive atlas-based front-end for discovery, input, and management, and robust data replication among selected trusted peers in the network. In conjunction with Inuit Tapiriit Kanatami (ITK) researchers and community representatives, a consent model is being built to guide the access control capabilities of the system.

GCRC and ITK are also working with Arctic College in Nunavut to develop a for-credit course focused on community research theory and practise. The learning resources attached to the course are being created with an open license and in an open community wiki that includes support from ELOKA members.

This paper will provide an overview of the system being built, the supporting consent and education work, the community content already housed in the system, and future directions for the project.

Geomatics and Cartographic Research Centre
Carleton University, Ottawa, Canada
