

## **Canadian Geoscience Knowledge Network Update #6 (March 2003)**

This email is the sixth in a series of CGKN email updates. Previous updates and other information about CGKN can be found at the CGKN Home Page (<http://cgkn.net>)

### **1) 3<sup>rd</sup> CGKN Workshop**

The CGKN will be holding it's 3<sup>rd</sup> National Workshop, March 7 to 9 at the Sheraton Centre Toronto Hotel. The workshop's objectives are to identify priorities for future CGKN development and to design a 2-year plan for each participating agency.

### **2) CGKN On-line Geoscience Data Catalogue Project**

This ongoing project is creating comprehensive catalogues containing consistent metadata describing all government geoscience data searchable through a CGKN Internet search engine and the GeoConnections Discovery Portal. This project is funded by the Earth Science Sector's Targeted Geoscience Initiative (TGI), NGSC agencies and GeoConnections.

Since the September 2002 update, the following progress has been made by the federal/provincial Implementation Working Group.

- a) 32 metadata catalogues from 10 NGSC agencies are now complete and online.
- b) The remaining agencies are currently making progress towards the completion of metadata catalogues and Internet server connectivity.
- c) The CGKN on-line catalogue search engine has now been operational for several months. Feedback has been received and improvements are planned over the next few months.

Progress to connect to agency housed metadata catalogues has been slower than planned. Each agency is encouraged to prioritize this work. Contact James Rupert for information.

### **3) CGKN Data Integration Working Group Update**

Teleconference calls have continued on a monthly schedule, allowing progress and problems of the discipline sub-groups to be shared and discussed. As the sub-groups become more active with their own communications strategy, the working group will shift its focus to addressing issues of coordination between the groups and the agencies involved. Developing the agenda for the 3<sup>rd</sup> CGKN workshop, which centres on the future direction of CGKN, has been a major preoccupation of the group for the past months.

### **4) Bedrock Geology**

Since September 2002, the focus has been on developing an interface for producing customized geological maps from a variety of user queries based on map unit name, age, and lithology, and presenting the maps at a variety of resolutions. This has allowed the efficacy of the organization of geological map information in the NADM database to be tested, and changes to be made as needed. This in turn has led to a version of the database design that better meets the needs of a flexible map geological database. This version includes a more robust, and better defined approach to making diverse map units interoperable based on their lithological characteristics. The deployment of the map query tool linked to a test database is allowing for peer review within ESS through live Intranet and PowerPoint demonstrations, and will be shown at the 3<sup>rd</sup> CGKN workshop in March to CGKN partners. ESS plans to adopt a "production" version of NADM for loading its bedrock geological maps within 2003. As part of this, applications for loading the database and making the various maps interoperable (e.g. legend parsing) are already in development. For further information contact Peter Davenport.

## **5) Surficial Geology**

A focus group meeting of select provincial, territorial and federal geologists was held during the May, 2002, GAC to ensure that the direction of the work was still appropriate. A full workshop was held in mid-December 2002, where consensus on the goals and mechanism was achieved. At this December workshop, the developments of science language, glossary, legend parsing tool and a proposed stewardship were presented to the 30+ provincial/territorial/federal participants. A plan to implement the CGKN science language standard and stewardship by April 1<sup>st</sup> and to allow initial data management trials by GSC was the prime outcome of this workshop. Contact Dr. Ron DiLabio for more information.

## **6) Geochemistry**

Version 1.2 of the Geochemistry Data Model is now fully compatible with CGKN metadata requirements. This model update was based on consultation with CGKN project participants and is currently implemented in Oracle, SQL Server and Access. Co-operation with the Ontario Geological Survey (OGS) and the loading and display of OGS geochemical data through the Geochemistry On Line portal is in progress. GOLDTools, a system for enabling data loading, has now been defined and is based on the evaluation and acceptance of a web-based query and data management component of the database. The business process for carrying out a geochemical survey has been outlined and will serve as the framework for a revised version of the Laboratory Information Management System. A demonstration project of how BizTalk can be used to control/monitor the business process was completed. Contact Eric Grunsky for more information.

## **7) Geophysics**

A project to provide information management framework, up-to-date metadata, and on-line interoperable access to geophysical data has been proposed under the GSC's issues-driven program, Consolidating Canada's Geoscience Knowledge (CCGK). The project target data sets include GSC/Geomatics Canada holdings of aeromagnetic, radiometric, gravity, seismic, magnetotelluric, and geochemical data. The Geoscience Data Repository Information Service (GDRIS) will be developed through CGKN to provide web-based access to the data and promote a level of interoperability among national, provincial, and territorial geophysical databases. For more information on the project, GDRIS for ESS Geophysical and Geochemical Data, contact Warner Miles.

## **8) XML/GML**

This CGKN/GeoConnections project has developed a series of provisional XML (Extensible Markup Language) and GML (Geographic Markup Language) "schema" for geoscience data that will allow, tagged, text-based exchange of geoscience data between agencies. In March 2002, the project delivered several prototype schemata for mineral occurrence data, geochemical data and geophysical data in grid form. The development of these schemata ensures that geoscience data can be archived and exchanged without loss of information. XML/GML is evolving as an exchange standard of choice in both government and commercial applications. The use of XML schema and transaction-based exchange is becoming integrated into several CGKN projects. No further work is being planned for this project and it is considered to be complete. Contact Eric Grunsky for more information.

### **9) Sedimentary Basin/Petroleum Resources**

Under the new ESS CCGK program, some activity will take place next year that will address both stratigraphy and Energy resources. This work will be conducted in consultation with CGKN partners. Contact Phil Moir for further information.

### **10) Mineral Deposits**

The mineral deposits data model subgroup was initiated in May, 2002, and has representatives from every province and territory, except Prince Edward Island. The group began by developing a mandate statement, which was posted on the CGKN members web site under Minerals Deposits on October 18. The essence of the mandate is to develop and implement a consistent, Canada-wide (federated) view of selected information elements from distributed provincial and territorial mineral deposit and occurrence databases, through the CGKN-NGSC Internet portal. An ongoing review of the contents of these diverse databases and the way that these contents are captured will provide insight into hurdles in making a cross-Canada common view. A client survey will be used to build a business case, to guide utility development, and to prioritize subject matter. Contact Lesley Chorlton for further information.

### **11) Geochronology**

A preliminary web-based version of the national geochronology knowledge base has been developed and will be launched in March 2003. This knowledge base is a combination of previously compiled public domain data and a recent partnered project with the Yukon Geology Program and the University of British Columbia to provide coverage for the Yukon. This pilot project was undertaken with the goal of compiling all available data from the Yukon into a national standard and making it available online. This is part of the national knowledge base, and will simultaneously be available through Yukon Territorial web sites. Similar projects are either underway or being discussed with other regions including BC, Saskatchewan and Nunavut. Additional compilations and database software developments will be done in the next two years as part of the ESS/CGKN approved project to provide national coverage and access to all public domain geochronological knowledge. Contact Mike Villeneuve for further information.

### **12) GSC Support**

Earth Science Sector support for the CGKN is currently positioned within the Consolidating Canada's Geoscience Knowledge Program. This program will address some of the information management issues within ESS and will take responsibility for the incorporation of ESS information into the CGKN.

### **13) GeoConnections Support**

GeoConnections accepted the CGKN funding proposal in late 2002. Due to receiving the funds late in the fiscal year, the proposal was re-evaluated and the CGKN only accepted funding for tasks that could be complete by fiscal year end. Therefore, GeoConnections' contribution to CGKN in 2002/2003 is \$125,000. This funding will contribute to the following projects: Surficial Geology, Geochemistry, Mineral Deposits, Data Catalogue and the CGKN Workshop. Contact John Broome for more information.