



CGKN integrated Mineral Resource Information Infrastructure for Canada

**Enabling a consistent view of distributed mineral
deposits & occurrences data across Canada**

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**(Phil Moir: Geoscience Information System for
Energy and Mineral Resources)**



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Purpose



- **Not to replace existing provincial and territorial databases and web access**
- **To make discovery of information about Canadian mineral deposits and occurrences across the country more convenient and appealing for users**
- **To draw more industry clients, international and national, to look at mineral potential in Canada**
- **To create efficiencies in maintaining and using complementary components of a Canadian mineral resource information infrastructure**



Outline



- **Proposed CGKN and CCGK minerals infrastructure**
- **Diagrams illustrating development of infrastructure in stages**
- **Suggested CGKN activities of minerals subgroup (2003/2004)**
- **Suggested CGKN activities of minerals subgroup (2004/2005)**
- **Benefits**



Proposed Canadian Mineral Resource Information Infrastructure



- **Prioritize data elements for a consistent, cross-Canada internet view of Canadian mineral deposits and occurrences data.**
- **Databases (non-static) will remain with authoritative provincial and territorial sources, and be accessed remotely.**
- **Distributed databases will be complemented by existing non-static ESS database of well-studied deposits.**
- **Distributed access (XML) and interoperability (NADM) will be tested using the ESS database (2003/4).**
- **The view of distributed P&T databases could be implemented at the P&T's own pace starting in 2004/2005.**
- **Prioritized data elements should be made bilingual to meet Government On-Line standards.**



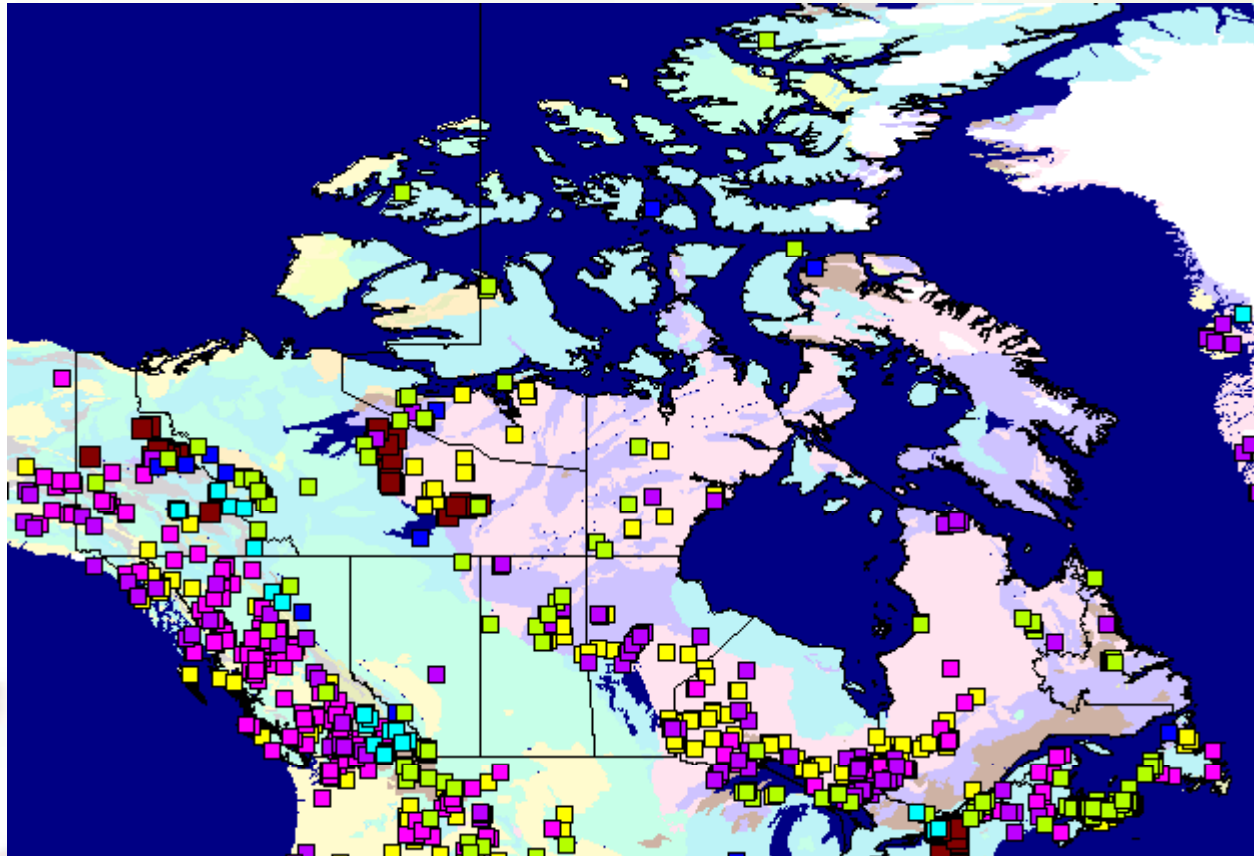
Database of well-studied deposits (from World Minerals Geoscience Databases)



- **Highly parameterized rather than free-text based: geological & radiometric ages, tectonic settings, related magmatic rocks, host rocks, mineralogy, classification, mineralization styles...**
- **Compiled from scientific literature; tied to references.**
- **Will complement, not replace, P&T databases based to greater extent on assessment reports, government reports and site visits, which document occurrences and contain additional types of information.**
- **Basis for comparisons of Canadian deposits with world class examples of major deposit types/models.**
- **Might provisionally supplement priority parameters missing in some P&T databases, or provide interim coverage.**



Distribution of ~ 1300 Canadian well-studied deposits, without VMS or diamonds



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Infrastructure - I



National Atlas:
shallow themes

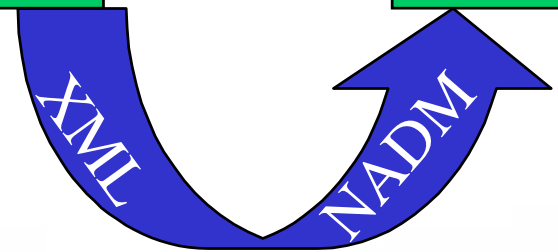


CGKN-ESS flagship
mineral deposit
databases: partners
and other projects



CGKN-GDRIS GOL
query-able view of
flagship deposits
databases: public

Negotiate linkage,
test connection



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Sector information
infrastructure

(Test the flagship database as a distributed, GOL interoperable database, and test possible linkages across NRCan sectors)

Infrastructure - II

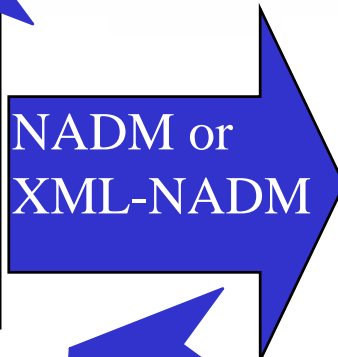
National Atlas:
shallow themes



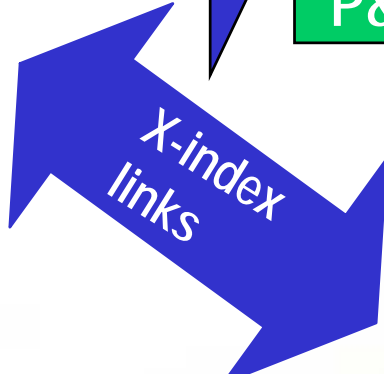
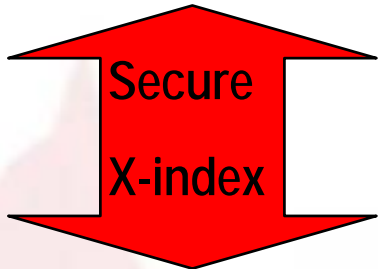
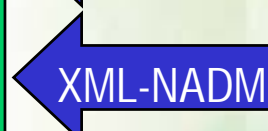
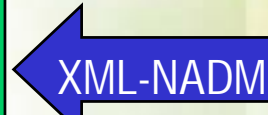
CGKN resource web
portal:query/ view



CGKN-ESS flagship
mineral deposit
databases: partners
and other projects



CGKN-GDRIS GOL
query-able view of
flagship & distributed
P&T databases



(Hub of
distributed
P&T access)

Mines & Metals
Sector information
infrastructure

CKGN
Geochem

CKGN
Geochron



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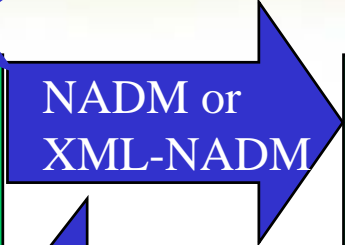
Infrastructure ---

CGKN resource web portal: query/ view/ get features/ switch sites

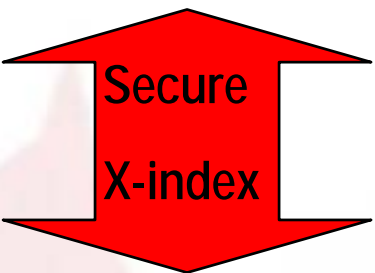
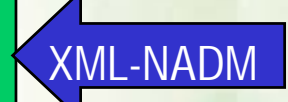
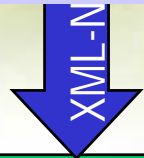
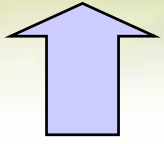
National Atlas: shallow themes



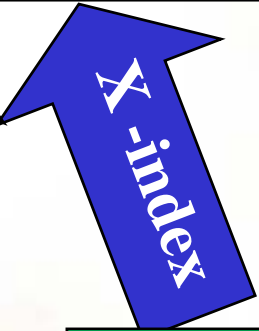
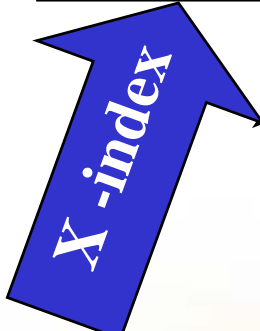
CGKN-ESS flagship mineral deposit databases : partners and other projects



CGKN-GDRIS GOL query-able view of flagship & distributed P&T databases: public



Mines & Metals Sector information infrastructure



CKGN Geochem.

CKGN Geochron.

CGKN mineral deposit working group activities (2003/2004)



- Review of state of provincial and territorial mineral deposit databases and web delivery (briefly in 2002).
- Review of topics in databases, and how information is stored (underway).
- Survey client profiles and their deposit topic preferences for a cross-Canada CGKN view (see preliminary version of survey).
- Recommend priorities using survey results and current database contents.
- Discuss mineral deposit classification systems (USGS/BCGS/DNAG/commodity-based).
- Prepare business case for NGSC and ESS program.



CGKN mineral deposit working group activities (2004/2005)



- Subject to reaction to business case, implement the consistent CGKN view of distributed P&T databases.
- Help shape the web presence: look – operations - scope.
- Implement alternative classification systems.
- Discuss protocols for ownership and update of databases in the CGKN-CCGK minerals infrastructure, synchronization of overlaps ...
- Discuss method of allowing a client's selection sets to be returned to the provincial/territorial sites when switching to the local site for more comprehensive information.
- Feedback to GDRIS about services, interfaces.
- Report and recommendations to NGSC, ESS, and GDRIS.



Benefits which could position P&T and ESS for the future:



- **Advertise Canadian mineral potential with a convenient one-stop web portal to discover, query common elements across borders, and visualize distributions before switching to local sites to extract greater detail.**
- **Draw clients in to look at areas they had not anticipated.**
- **Convenience in illustration of geospatial patterns, e.g., the continuation of metallogenic tracts across borders.**
- **Build efficiency into Canada's mineral deposit information infrastructure: enlarge stakeholder community, control versions and streamline updates.**
- **Quantitative analyses of typical commodity content ranges for mineral deposits classes tailored for Canada could be eventually enabled (among MMS, GSC, P&T).**
- **Stable framework to hook in non-geoscience information.**



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