PROPOSED NORTH AMERICAN GEOLOGIC-MAP DATA MODEL

SCIENCE-LANGUAGE TECHNICAL TEAM CHARTER
11/1/99

Executive Statement.—See the Data Model Steering Committee (DMSC) charter for an executive statement on technical teams.

MANDATE AND CHARGE

Mandate.—The Science Language Technical Team (SLTT) is mandated to develop standardized nomenclature for digital geologic-map databases—including (but not limited to) the following areas:

- nomenclature for the description of geologic map units (lithology, stratigraphy, geomorphology, pedology, petrology, genesis, etc.)

- nomenclature for the description of linear geologic features (contacts, faults, fold axial traces, mapped marker units, geomorphic features, etc.),

- nomenclature for the description of point geologic features (structural points, etc.);

- nomenclature for descriptive and interpretive information about spatial and geologic relations among geologic map units, linear features, and point features (e.g., sequencing relations, stratigraphic relations, and geometric relations, etc.).

The standardized terminology will support a proposed standard geologic-map data model for North America.

Charge.—To achieve its mandate, the Science Language Technical Team is charged with the following tasks:

(1) To determine the scope and comprehensiveness appropriate to a continent-wide terminology for geologic map databases. Terminology scope should reflect several realities, including (1) the intended use of the geologic-map terminology, (2) the geologic scale to which the terminology will be applied, (3) the prerogatives of historic usage by various geologic-mapping constituencies, and (4) the degree to which geologic terminology is amenable to a single hierarchical classification structure. These factors (and others developed by the SLTT) should determine the degree and level of standardization appropriate for continent-wide geoscience language.

(2) To develop one or more strawman classifications for geologic-map science language that will be made available for widespread peer review.

(3) To prepare and publish documents describing the basis for the science-language terminology, and presenting the classification scheme(s) and their technical and non-technical definitions.

Authority.—The SLTT derives its authority and legitimacy from the DMSC, which provides guidance and requirements on behalf of the constituencies it represents.

Accountability.—The SLTT is accountable to the DMSC. Through a representative mutually acceptable to the SLTT and DMSC, the SLTT periodically apprises the Steering Committee of progress toward science-language terminology and about issues and problems that need consideration by the DMSC.

TECHNICAL-TEAM OPERATIONS

Execution of work.—The SLTT will convene an initial meeting to evaluate goals and to discuss issues, problems, and terminology strategies. The Technical Team should have as many face-to-face meetings as required to allocate responsibilities and to resolve issues and problems not easily resolvable via e-mail.

Lateral Coordination.—The SLTT will regularly communicate strategies and proposed terminologies laterally to other Technical Teams—especially the Data-Model Design Technical Team—in order to ensure that data-model architecture and software tools consistently reflect the evolving science language and concepts.

Technical Review.—Science-language documents prepared by the SLTT will be presented to the DMSC for initial review and evaluation for compliance with the overall goals of the North American geologic-map data model. Following DMSC review and SLTT response, the science-language documents will be widely distributed for technical peer review by the geosciences community (probably through a web-based venue).

TECHNICAL-TEAM MEMBERSHIP

Work Group Size.—The size of the SLT should be commensurate with its mandate: If geologic and political realities require that the scope and content of data-model science language be generalized and narrow, then the size of the Technical Team should be small; however, if the scope and content of data-model science language is to be comprehensive and detailed, then the size of

the Technical Team should be large enough to ensure scientific comprehensiveness and consensus of the larger geologic community.

Scientific Breadth.—SLTT membership should span the range of surficial and bedrock geologic disciplines, including expertise in sedimentary, igneous, metamorphic, structural, stratigraphic, and geomorphic/pedogenic arenas. Experts on specific scientific disciplines can be added for short durations to address specific geologic issues that arise during SLTT deliberations.

Geographic Breadth.—SLTT membership should include a broad range of geographic representation so as to reflect provincial geologic usages.

Constituency Breadth.—SLTT membership should represent the constituencies that will contribute to geologic map databases—initially including the U.S. Geological Survey (USGS), the Association of American State Geologists (AASG), the Geological Survey of Canada (GSC), and the Canadian Provincial Surveys. Inclusion of industry and academic participants will depend on the narrowness or breadth of the science-language standards.

Appointment procedure.—SLTT members shall be appointed by the DMSC based on the recommendations of each constituency and considering the criteria defined in Scientific, Geographic, and Constituency Breadth:

- AASG recommendations will come from the AASG Digital Geologic Mapping Committee;
- GSC recommendations will come from that agency as appropriate to its internal selection procedures;
- Recommendations from the Canadian Provincial Surveys will come from those agencies consistent with their interest and appropriate to their internal selection procedures;
- Recommendations from the USGS will come from that agency as appropriate to its internal selection procedures.

Lifespan of Technical Team.—Continued existence of the SLTT as a standing committee responding to data-model science–language needs shall be at the discretion of the DMSC. The SLTT will remain intact during the review period, and shall respond to Steering Committee review and to peer review until such time as version 1.0 of the science-language classification is adopted for use in the draft standard data model.

MILESTONES

Within a year of convening its first session, the SLTT shall carry out its charge to produce one or more science-language strawman classifications. The

SLTT receives guidance on milestones from the DMSC, evaluates their feasibility, and reaches targets in conjunction with DMSC.