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Strategic Roadmap for the U.S. Geoscience Information Network

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An external advisory working group has prepared a 5-year strategic roadmap for the U.S. Geoscience Information Network (USGIN). USGIN is a partnership of the Association of American State Geologists (AASG) and the U.S. Geological Survey (USGS), who formally agreed in 2007 to develop a national geoscience information framework that is distributed, interoperable, uses open source standards and common protocols, respects and acknowledges data ownership, fosters communities of practice to grow, and develops new Web services and clients.

The intention of the USGIN is to benefit the geological surveys by reducing the cost of online data publication and access provision, and to benefit society through easier (lower cost) access to public domain geoscience data. This information supports environmental planning, resource-development, hazard mitigation design, and decision-making. USGIN supposes that sharing resources for system development and maintenance, standardizing data discovery and creating better access mechanisms, causes cost of data access and maintenance to be reduced. Standardization in a wide variety of business domains provides economic benefits that range between 0.2 and 0.9% of the gross national product. We suggest that the economic benefits of standardization also apply in the informatics domain. Standardized access to rich data resources will create collaborative opportunities in science and business. Development and use of shared protocols and interchange formats for data publication will create a market for user applications, facilitating geoscience data discovery and utility for the benefit of society.

The USGIN Working Group envisions further development of tools and capabilities, in addition to extending the community of practice that currently involves geoinformatics practitioners from the USGS and AASG. Promoting engagement and participation of the state geological surveys, and increasing communication between the states, USGS, and other stakeholders are prerequisites for community development. A key element of community building is personal interaction. The USGIN community can establish an identity for geological survey informatics practitioners, can assist in prioritizing technical development that is specific to the geological survey community, and can leverage development taking place in the larger community. Policies, protocols, and procedures for developing, reviewing, and distributing specifications can be adopted from established practices developed by existing organizations, such as the OGC. Documenting and promoting best practices through demonstrations, education, and outreach within the geological survey community is paramount for fostering deployment of interoperable services for data discovery and distribution.

Evolution of the current Balkanized geoinformatics practice into a more cohesive and effective community has been and will continue to be an incremental process. The role of USGIN as an entity in this larger community requires organization, planning, promotion, and funding. As a member of a community activity, the role of USGIN as a leader in the community must be organic and emergent. Essential implementation activities include:
• Establish a long-term governance model
• Develop a business model
• Explore testbed opportunities
• Develop marketing strategy