Geophysical Research Abstracts
Vol. 14, EGU2012-6057, 2012
EGU General Assembly 2012

A Geo-Label for Geo-Referenced Information as a Service for Data Users and a Tool for Facilitating Societal Benefits of Earth Observations

H.-P. Plag

University of Nevada, Reno, Nevada Bureau of Mines and Geology and Seismological Laboratory, Reno, United States (hpplag@unr.edu)

Geo-referenced information is increasingly important for many scientific and societal applications. The availability of reliable and applicable spatial data and information is fundamental for addressing pressing problems such as food, water, and energy security; disaster risk reduction; climate change; environmental quality; pandemics; economic crises and wars; population migration; and, in a general sense, sustainability. Today, more than 70% of societal activities in developed countries depend directly or indirectly on geo-referenced information. The rapid development of analysis tools, such as Geographic Information Systems and web-based tools for viewing, accessing, and analyzing of geo-referenced information, and the growing abundance of openly available Earth observations (e.g., through the Global Earth Observation System of Systems, GEOSS) likely will increase the dependency of science and society on geo-referenced information. Increasingly, the tools allow the combination of data sets from various sources. Improvements of interoperability, promoted particularly by GEOSS, will strengthen this trend and lead to more tools for the combinations of data from different sources.

What is currently lacking is a service-oriented infrastructure helping to ensure that data quality and applicability are not compromised through modifications and combinations. Most geo-referenced information comes without sufficient information on quality and applicability. The Group on Earth Observations (GEO) has embarked on establishing a so-called GEO Label that would provide easy-to-understand, globally available information on aspects of quality, user rating, relevance, and fit-for-usage of the products and services accessible through GEOSS (with the responsibility for the concept development delegated to Work Plan Task ID-03). In designing a service-oriented architecture that could support a GEO Label, it is important to understand the impact of the goals for the label on the design of the infrastructure.

Design, concept, implementation, and success of a label depend on the goals, and these goals need to be well-defined and widely accepted. Strong labels are generally those that are unique in their field and accepted by an authoritative body in this field. A label requires time to get accepted, and once established the key characteristics normally can not be changed. Therefore, an informed decision on a labeling for geo-referenced data is crucial for success. GEO is in a position to make this decision. There is a wide range of potential goals for the GEO Label including: (1) an attractive incentive for involvement of S&T communities by giving recognition for contributions; enabling credits for providers (attribution); and supporting forward traceability (usage); (2) promote data sharing by signaling data availability and conditions; (3) inform users by increasing trustworthiness; characterizing quality; characterizing applicability; ensuring backward traceability (data sources); (4) inform providers (and their funders) by providing information on relevance (meeting user needs); and provide information on usage.

GEO will have to decide on which of these goals to choose for the GEO Label. Input from GEOSS users and S&T communities would help to reach a decision that would serve best all those depending on geo-referenced information.