



Interoperability in geosciences – networking of metadata, data and applications

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Nowadays the amount of geo-instrumental raw data and processed data covering all different spheres of geosciences is increasing in a dramatically way. According to a responsible handling of valuable and often unique data most of these data should be well described and documented by metadata as well as stored in fail-safe long-term data archives. This approach in data management supplemented by catalog-based information systems opens the doors to a successful distribution and usage of data by the scientific community. All bigger geoscience organisations, institutions or even projects have appropriate information systems providing specific data and information. Still most of these systems are isolated, using diverse metadata vocabulary for describing the data and providing different and often proprietary interfaces to data and information. What does it mean for the users, either a lot of useful data is undiscovered by a big majority of users, sometimes data are only accessible by insiders or it is a giant work for the users to find and get access to all required data and information which are available in the different archives and systems. In order to start solving this problem, first real interoperability concerning metadata and information exchange interfaces at least on a minimum common basis is necessary. The agreement concerning a common meta-level of metadata, the usage of a collection of information based on this agreement in the different catalog-based information system as well as the availability of standardized catalog service interfaces will provide the opportunity of real networking of first distributed metadata and later on distributed data and application.