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Collaborative work and tools towards wide scientific community driven metadata model and vocabulary building. The case of the EU GeoSeas project.

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The philosophy of science states that a given concept may exist only in the context or paradigm in which it is defined and only with difficulty can be that concept used elsewhere (Diviacco & Pshenichny 2010, Latour & Woolgar 1979, Kuh 1962). As a result in any research field, but particularly in earth sciences, there exists a spectrum of different visions of similar topics ranging from high abstraction levels (e.g. the research hypothesis) to lower levels (e.g. metadata parameters). The broader the community or the higher the level of abstraction the higher the level of divergence that can be seen. These observations can be attributed to the scientific process: namely the formulation of hypotheses.

This formulation of hypotheses is spread across all aspects of scientific research. The acquisition parameters of a geophysical survey, for instance, could be considered by a non-specialist as simply an administrative number. However to a specialist, they represent a piece of the bigger picture linking the sampling strategy to the hypothesis which the fieldwork is designed to test. Similarly, in the case of metadata, communities can be strongly divergent in the specification and creation of metadata to the detriment of the creation of strongly needed shared data spaces within that scientific community.

The EU FP7 Geo-Seas project is implementing an e-infrastructure comprising 26 marine geological and geophysical data centres located in 17 European countries. The infrastructure will enable users to identify, locate and access harmonized, pan-European marine geological and geophysical datasets and derived data products held by the data centres through a single common web-based system. The aims of Geo-Seas are aligned with European directives and recent large-scale framework programmes on global and European scales, such as GEOSS and GMES, EMODNET and INSPIRE.

One of the first achievements of Geo-Seas was the specification of a metadata model and vocabulary fitted to the needs of such a wide community. Throughout this process, great attention was paid to the issues described above, harmonizing conflicts among partners with different visions and backgrounds. Collaborative tools were introduced to facilitate the process that provided simultaneous coordination of discussions, sharing of information and room for negotiation. All partners were continuously aware of the state of the discussion and were granted access to the same information. Discussion threads were represented graphically in order to allow users to relate and link arguments. We present here the tools used and our experiences during this process.

References:
Diviacco, P., and Pshenichny, C.A., 2010. Concept-referenced spaces in Computer-supported Collaborative Work. European Geosciences Union (EGU) 5th General Assembly, Vienna (Austria), April 2010, Geophysical Research Abstracts, Vol. 12, EGU2010-6258.
Latour, B. and Woolgar, S. (1979): 'Laboratory Life: The Construction of Scientific Facts'
Kuhn, T.S. (1962) 'The Structure of Scientific Revolutions', University of Chicago Press, 1962.