



## **The harmonization role of a geologic standard language like GeoSciML in the International projects as OneGeology and OneGeology-Europe.**

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OneGeology is a flag project of the IYPE that born in to 2007 the main target is to realize an accessible for everyone via web digital geological map of the world at the scale 1:1.000.000, using a technological tool like Google-Earth. In 2008 29 European Scientific partners built a pan-European project co-founded by the European Commission called OneGeology-Europe to drive the International project and develop technologies and standards that allow the project to growth up quickly. The European project represents a test for harmonization of data and vocabularies provide by different European Geological Survey.

Both the projects have beside a unique engine to drive the harmonization that is represented by the a geological standard language for inter-change the data. This language allow to increase the data interoperability at the European level. The standard language is GeoSciML (Geosciences Mark-up Language) developed by the Interoperability Working Group of IUGS-CGI Committee.

The language is also under the International body of interoperability OGC (Open Geospatial Consortium) that support the language in our portal and schemas.

The use of GeoSciML schema model is to provide to the web-clients a unique response of geological information provide by the different Data-Server of Geological Survey, transforming the inner database structure in a unique standard structure that it's more easily to understand from the generic users.

The GeoSciML stable schema at the moment is the version 2 that is also available at the follow link: <http://cgi-iugs.org/welcome.html> .The conceptual model is composed from 27 parts where is distributed the geological information; each part is linked to the Mapped-Features that represent the base element of model. To test the model is realized a testbed phase to support some functionality of the model like Geologic Units information, Lithology, Geologic Structure information and also Boreholes.

The model has created a number of dictionary to standardize the term of certain themes and also created the vocabularies to identify the international standard vocabulary that it's a part of the model. A specific work has been done in the Testbed 3 to realize a multi-language vocabularies for stratigraphic scale and lithology features. This two are recognized as the minimal information to provide in the first step of Onegeology and OneGeology-Europe projects.

The first test of GeoSciML model and OneGeology data presented on the web with specific geoportal is been done in August 2008 during the 33th International Geologic Congress. Now a new testbed phase is started and an example of GeoSciML harmonization is been realized for the Summer of the 2009.

The great role played by the GeoSciML Standard language is to provide standard information to the user about geologic units, age, lithology that area served by the European country at the scale 1:1.000.000. For OneGeology-Europe project is scheduled also at detail test in some cross-border area to compare the harmonization skill and GeoSciML potentiality for geologic and applied geologic detail data.