



The French initiative for scientific cores virtual curating : a user-oriented integrated approach

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Managing scientific data is probably one of the most challenging issues in modern science. The question is made even more sensitive with the need of preserving and managing high value fragile geological samples: cores. Large international scientific programs, such as IODP or ICDP are leading an intense effort to solve this problem and propose detailed high standard work- and dataflows thorough core handling and curating. However most results derived from rather small-scale research programs in which data and sample management is generally managed only locally – when it is . . .

The national excellence equipment program (Equipex) CLIMCOR aims at developing French facilities for coring and drilling investigations. It concerns indiscriminately ice, marine and continental samples. As part of this initiative, we initiated a reflexion about core curating and associated coring-data management. The aim of the project is to conserve all metadata from fieldwork in an integrated cyber-environment which will evolve toward laboratory-acquired data storage in a near future. In that aim, our demarche was conducted through an close relationship with field operators as well laboratory core curators in order to propose user-oriented solutions.

The national core curating initiative currently proposes a single web portal in which all scientific teams can store their field data. For legacy samples, this will require the establishment of a dedicated core lists with associated metadata. For forthcoming samples, we propose a mobile application, under Android environment to capture technical and scientific metadata on the field. This application is linked with a unique coring tools library and is adapted to most coring devices (gravity, drilling, percussion, etc...) including multiple sections and holes coring operations. Those field data can be uploaded automatically to the national portal, but also referenced through international standards or persistent identifiers (IGSN, ORCID and INSPIRE) and displayed in international portals (currently, NOAA's IMLGS).

In this paper, we present the architecture of the integrated system, future perspectives and the approach we adopted to reach our goals. We will also present in front of our poster, one of the three mobile applications, dedicated more particularly to the operations of continental drillings.