Setting up a general data collection system integrating different types of oceanographic survey data

Deneudt Klaas, *Flanders Marine Institute/Vlaams Instituut voor de Zee-VLIZ, klaas.deneudt@vliz.be, (Belgium)*
Rosseel Sherley, *VLIZ, Sherley.Rosseel@vliz.be*
Hernandez Francisco, *VLIZ, tjess@vliz.be*

Oceanographic data centers are confronted with a broad diversity of datasets, going from physical and bio-chemical to biological data. There are different ways of dealing with this variety of data. One could set up a series of very specific databases, each storing data in its own particular way. One could also set up a data collection system that is sufficiently generic to integrate different data types. The IMERS data system (Integrated Marine Environmental Readings and Samples), developed at the Flanders Marine, is an example of the latter approach.

This presentation deals with the how's and why's of data integration and with the advantages and drawbacks of the development of a multidisciplinary data collection system. An important part of the IMERS data system is dedicated to data administration and meta-data administration. This makes IMERS suitable for data management of the sometimes very diverse and complex project related data. Resulting benefits of this extensive administration are easy data retrieval and identification of lacking data and prevention of duplicate data entry. On the other hand, this administration makes data entry very labor intensive, which makes fast progress hard.

Furthermore this case study shows how a growing amount of data is made accessible online and how international vocabularies are used to enhance the exchange with international data compilations (Seadatanet-CDI, Eurobis, …).

User perspective:

The user that is interested in access and use of the data is presented with a web interface that allows querying the database based on certain search criteria. Search criteria that can be included are based on parameters measured and taxonomic, spatial and temporal scope. The user can visualize the resulting data in tables and can export the data to different output formats.

The standard user can only access the public part of the data. Accessing non-public data through the web interface requires an account, usually distributed only for accessing data in the framework of joint projects.

Technical details:

IMERS is an MS SQL SERVER database. However, it is most commonly accessed through a Microsoft Access front end for management purposes. For manual data input from original paper data sheets, an input application has been set up in VB.net.

For online user access to data, a web interface has been set up using PHP (Hypertext Preprocessor) and css.

Geographical querying is facilitated using MapServer that renders spatial data to the web and allows querying that spatial data. Analysis tools and geographic querying have not been the main focus of the system up to now and functionalities are as a consequence rather poor. A more advanced interface is under development.