INTEGRATION OF HETEROGENEOUS INFORMATION RESOURCES IN THE OF MARINE ACTIVITY AND ENVIRONMENTAL: INFORMATION, TECHNOLOGICAL AND ORGANIZATIONAL ASPECTS

Evgeny Vyazilov (All-Russia НИИ of the Hydrometeorological Information – World Data Centre. Obninsk, e-mail: vjaz@meteo.ru)

The Unified system of the information on the World ocean condition (ESIMO) represents a network of information systems of various organizations of the ministries and departments of Russia (Virtual Data Centre). These organizations are connected about research of marine environment and marine activity. These systems are realized on different principles, platforms and program tools.

The developers ESIMO have chosen the decision on creation of Web-guided technology of information resources (IR) integration. ESIMO includes IR, storage in organizations - participants ESIMO and other organizations, including foreign, as bases and data sets of current, operative, historical data and climatic, diagnostic and forecast information, and also functional applications sold in multidimensional (language, program, linguistic, etc.) environment. The access to IR of system is carried out through ESIMO Web-portal (http://data.meteo.ru:8080/resource/index.jsp).

The integration is made:
- with use of unified model of the IR description;
- by creation and conducting a wide complex of metadata objects (information about IR, organizations, experts, formats, software, other), unified dictionary of parameters;
- by using multiple approach on creation of a database;
- by creation and storage of electronic copies of the documents and images as file system.

These approaches provide decision of management tasks the diverse and small structured IR by means of:
- unique identification of information sources;
- uniform access to all IR and use of specific search attributes for the different forms of information representation (textual, factographic, graphic, spatial), types data (observations, analyses, forecasts, climatic);
- using of several methods of access depending on specificity of a source data (HTML - pages, ftp - files, databases, applications).

Alongside with the actually data and information production on marine environment and marine activity the technology supports an opportunity of inclusion in ESIMO of electronic copies of the legal and scientific and technical documents.

In system the removed input of the IR descriptions and their copies in a database ESIMO web-portal is provided. On the basis of the IR descriptions the automated search, manipulation to IR and its elements (time series, grid, station, other) is carried out. The search is possible on classification (sphere, process, and parameters), geographical areas, and organizations - IR authors. On portal are opportunities of creation personal of pages for the separate users of a various thematic orientation. The IR monitoring, and also management of registration and access to IR is carried out by administrative service of ESIMO Web - portal.

For conducting and use portal is developed multi component, cross- platforms, informational - programming complex. The program nucleus of a complex provides management and storage of the IR descriptions and metadata in DBMS Oracle 9i. The user interface is realized on the basis of technology J2EE.