ISIR Metadata: Definition and Usage.

A.N. Bezdushny, A.A. Filippova, A.S. Lopatenko, A.M. Medennikov, V.A. Serebryakov
RAN Information Centre

The successful development, operation and use of complex informational system heavily depends on the effective use and management of metadata. This metadata is needed for analysis, system design, development, usage and solving interoperability problems.

For Digital Library -like system, which one is ISIR, metadata have a great value for system management, development, tuning and interoperation. From our point of view, all metadata can be subdivided into two types. The first one is intended for data schema descriptions, functional and data specification. The other is intended for informational resource descriptions.

Of the first type of the metadata, under usage in ISIR there are OMG XMI and OMG CWM standards. The XMI is being utilised for ISIR Informational schema description, ER diagrams and ISIR object model description. The XMI descriptions are being exploiting by ISIR data exchange system and ISIR development tools. Have been specially developed XMI. Extended is utilised for description of XML, RDF schemas.

The CWM is being utilised for description of RDBMS schema of ISIR system. The CWM is being exploiting by ISIR data exchange system for specification of data extract transform-load process and by ISIR RDBMS schema development tools.

The design of the resource metadata model was subjected to the following requirements:

- adequate representation of information concerning Russian Academy of Sciences;
- provision of interoperability with other systems having similar information.

In order to meet these several international standards for metadata description were analysed. Based on this study ISIR RAS data model was developed. This model comprises of the following types of resources: "organisation", "person", "project" and "publication". Some of them are based on standards, some are not and should be transformed from ISIR RAS model into a standard model.

For the purpose of information interchange among ISIR RAS and various systems the RDF data model and syntax is adopted and standard metadata formats are used to define namespaces for this model.