CARISMA, a Tool for Sharing Environmental Information Resources

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Abstract

CA.R.I.S.M.A. (Catalogo delle Risorse Informative SINAnet e Metadati Ambientali, in English: Catalogue of Information Resources and Environmental Metadata) is a software application developed to allow easy access and documentation of information resources available on nodes of SINAnet, Italian National Environmental Information Network. SINAnet has been designed mainly to produce and share environmental information needed to support decision-making process in environmental policy field. The network links many different regional and national environmental public organisations, operating on a self-governing basis, with different level of development of their information systems.
An emerging problem is the need to share a fast growing amount of heterogeneous information resources, often not (or not yet) suitable to be arranged in a Data Warehouse system. Such resources range from structured databases, vectorial and raster GIS maps, software applications, to electronic documents and spreadsheets. They concern not only environmental data and applications for their management, but also technical guidelines, reference databases, GIS maps to be used for geo-referencing data, etc.
Main characteristic of CARISMA is to be an Internet-oriented application giving access to all kind of available information resources in a homogeneous applicative environment, by means of common browser capabilities and FTP services. Resources can reside on servers either placed in user's LAN or other nodes of SINAnet, or reachable by an Internet URL. Moreover, resources suitable to be downloaded as files can be hosted by CARISMA data server. The application is based on widely used software tools and platforms both for server and client side, requiring low expenditure and personnel resources for installation and maintenance.
Features provided by CARISMA include:

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- flexible management of items in the catalogue on hierarchical trees with unlimited levels, created according to user's needs. Hierarchical trees of resources can be navigated when enquiring the catalogue.
- an easy-to-use web interface, with drag-and-drop functionalities, allows registered users, without software or telematic skill, to manage catalogue entries concerning their "owned" resources, not only to update documentation, but also to provide technical data to make resources accessible.
- compliance of resources metadata with emerging international standards (Dublin Core Metadata Element Set), through compliance with data model of European CDS (Catalogue of Data Source);
- Four different patterns for resource classification and retrieval, including use of key words from a controlled vocabulary.

CARISMA, as all applications developed by ANPA, is available for SINAnet organizations as "open source" software.