Aim

NeOn aims to advance the state of the art in using ontologies for developing large-scale semantic applications in distributed organisations. In particular the project is creating an open infrastructure, and associated methodology, to support the complete development lifecycle of this new generation of semantic applications. This infrastructure is being validated and applied in two large-scale case studies involving the Food and Agriculture Organization of the United Nations (FAO) and the Spanish pharmaceutical cluster PharmaInnova.

Networked Ontologies in Fisheries

The Food and Agriculture Organization of the United Nations leads international efforts to defeat hunger. FAO is a source of knowledge and information, helping both developing countries and countries in transition to modernise and improve agriculture, forestry and fisheries practices and to ensure good nutrition for all. An important area for FAO is Fisheries Resource Management.

FAO/17789/A. Conti

FAO's role in NeOn is to implement a Fish Stock Depletion Assessment System (FSDAS) applying NeOn technologies and methodologies, with the goal of improving the management of the knowledge relevant to fishery communities.

FAO/17099/M. Marzot

The effective management of shared fish stocks is one of the great challenges for long-term sustainable fisheries. The fisheries department uses various information and knowledge organisation systems to facilitate and secure the development and utilisation of the world's fisheries and aquaculture. Although much of the data are 'structured', they are not necessarily interoperable. Additionally, there are information resources that are not available through databases but are available as parts of websites, as individual documents, images, etc. These data sources could be better exploited by bringing together related and relevant information, along with the use of a fishery ontology, to provide inference-based services, language independent extraction and discovery, thus enabling policy makers and national governments to make informed decisions.

Links

FAO of the UN: **www.fao.org**

NeOn at FAO: **www.fao.org/aims/neon.jsp**

The Pharmaceutical Cluster

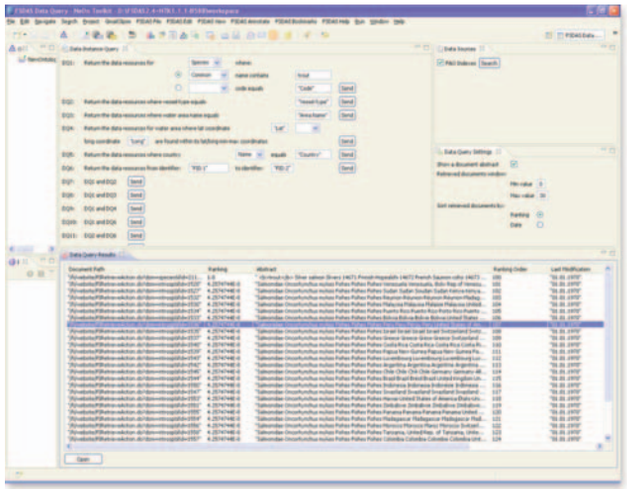
The pharmaceutical sector consists of networks involving several large companies, but also many small businesses. In Spain there are about 1,400 pharmaceutical labs, 300 wholesalers distributing over 138,000 registered products to more than 20,000 pharmacies. Currently, each lab has individual agreements with its business partners, creating a very inefficient set-up. The sector would significantly benefit if the pharmaceutical labs were to cluster together to share resources (cf. the PharmaInnova cluster, **www.pharmainnova.com**).

NeOn's activities in the pharmaceutical domain focus on two areas of the market. Firstly in the development of methods and tools to support and maintain homogeneous access to information about pharmaceutical products. Specifically, to provide the timely dissemination of updates regarding the introduction and withdrawal of medicines, and also to provide accurate and unified information on request.

Secondly NeOn is also tackling the financial aspect of this sector. Since a European directive in 2002 authorised the use of digitally signed electronic invoices for commercial transactions, its use has grown exponentially. The heterogeneity of invoicing solutions and poor uptake of standards are key obstacles preventing the widespread use of digital invoices. NeOn's aim is to enable automatic processing of arbitrary invoices by abstracting their content out of any particular representation format or technology.

Demonstrators

FSDAS - as a first version, has been realised recently. It makes use of NeOn technologies to provide homogeneous access to various distributed and heterogeneous information resources, including the fisheries networked ontologies developed within NeOn, as well as FAO's document bases.



I2Ont - applies NeOn technologies and methods to significantly reduce the problem of invoice interoperability in the Spanish pharmaceutical industry. It is used by stakeholders to create mappings between their local proprietary invoice formats and a reference networked ontology. These mappings are then used in financial transactions involving arbitrary invoice formats within the PharmaInnova cluster.

PARTNERS

The Open University

AIFB - Universität Karlsruhe

Software AG

Laboratorios Kin S.A.

Intelligent Software Components S.A.

Universidad Politécnica de Madrid

Institut National de Recherche en Informatique et en Automatique

Institut Jožef Stefan

Universität Koblenz-Landau

University of Sheffield

Ontoprise

Consiglio Nazionale delle Ricerche

Food and Agriculture Organization of the United Nations

Atos Origin

FOR MORE INFORMATION

Email Jane Whild, Project Administrator:
contact@neon-project.org

Lifecycle Support for Networked Ontologies

NeOn

www.neon-project.org

The NeOn Case Studies

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