Motivation

The rapid changes in information technology have heavily influenced the scientific way of working and style of communication. Global communication technologies like email or mobile telephony enable a fast and ubiquitous information exchange and the time spans between generation of new results and the subsequent publication and dissemination (innovation cycles) are becoming shorter. This results in a flood of available scientific information that cannot be handled manually by the individual reader. Whereas classical libraries still offer services in the form of printed material, the use of digital services like online journals, topic-centered databases, or digital libraries, is becoming prevalent in the scientific community.

Challenges

Building on the experiences from designing part of the chemical information platform "chem.de" (http://www.chem.de), which is hosted by the TIB, the Chemistry Information Centre Germany (FIZ Chemie), and the German Chemical Society (GDCh), the ViFaChem 2 platform will focus on innovative value added services thus providing a pervasive information infrastructure for universities as well as industry to support the generation of new knowledge.

Highlights

Scientific libraries provide an information infrastructure that collects, processes and connects heterogeneous document collections with respect to the information needs of each individual user. Due to the editorial process the quality of information is guaranteed throughout the process. Using advanced information extraction and entity recognition techniques on chemical literature the information (e.g. full texts, chemical reactions, images of molecular structures) will be collected. Moreover, using all document information structural properties of the domain like taxonomies of tags and annotations, or Ontologies over controlled vocabularies (encoding domain knowledge) can be derived and subsequently used for structuring novel personal information spaces enriched by metadata with controlled quality.

Project abstract:

L3S research center starts a new project in the area of personalized digital libraries. In tight cooperation with the German National Library of Science and Technology Hannover (TIB) the project “Virtual Library for Chemistry” will investigate and deploy innovative value-adding services for Information provisioning in the area of chemistry. The project’s vision is the creation of personal information spaces that offer a variety of relevant resources tailored to the individual user’s understanding of the topic.
http://www.l3s.de/vifachem

Research Area:
E-Science

Status of the Project: