THE 4TH ODBIS VLDB WORKSHOP ON

ONTOLOGY-BASED TECHNIQUES FOR DATABASES IN INFORMATION SYSTEMS AND KNOWLEDGE SYSTEMS

CO-LOCATED WITH VLDB 2008 IN AUCKLAND, NEW ZEALAND.

Date: August 23rd , 2008
Link: http://conferences.telecom-bretagne.eu/odbis08/
Contact: odbis2008@sophia.inria.fr

AIMS AND SCOPE

Ontologies serve as a means for establishing a conceptually concise basis for communicating knowledge in any context. Ontologies can be very useful for a community as a way of structuring and defining the meaning of the metadata that are currently collected and standardized. Applications using ontologies become more intelligent since they can more deal with human background knowledge. More generally, ontologies are critical for applications which want to merge information from diverse sources. They become a major conceptual backbone for a broad spectrum of activities dealing with databases either in information systems (IS) or in knowledge systems (KS). IS professionals and researchers have traditionally dealt with issues of identifying, capturing, and representing domain knowledge within information systems. In the structural dimension, ontologies can provide mechanisms for organizing and storing items including database schemes, user interface objects, and application programs. In the temporal dimension, ontologies can guide the development of new information systems by helping analysts and designers to choose appropriate processes, algorithms, rules, and software components depending upon their needs. The "ontology-driven information systems" approach proposes new ways of thinking about ontologies and IS in conjunction with each other and covers both the structural and the temporal dimensions of information systems.

A key point in databases is the ability to make data available semantically, that is, to find an automated and meaningful way of expressing their structure and semantics. Indeed schemes as sets of rules represent complex agreements made by designers with domain experts about data and so constitute a potentially valuable basic resource for eliciting ontologies. For instance, relational schemes are purely lexical, often obtained from more conceptual ones which are flattened into tables with a loss of information about roles and concepts. Within this perspective, an approach is to search for a tool which will automatically create ontologies corresponding to the content of the database and make them available for humans and machines.

On the other hand, due to their independence from lower level models, ontologies are used for integrating heterogeneous databases enabling interoperability and specifying interfaces to knowledge systems. Availability of the background knowledge stored in ontologies increases significantly the support which can be given for indexing as well as for searching. Ontologies may be useful too for conducting extraction tasks for discovering patterns, interpreting rules or conceptual clustering.

Furthermore ontologies can be used to provide semantic annotations for collections of images, audio or other non-textual objects.

The objective of this workshop is to present researches on databases in information systems and knowledge systems as they relate to ontologies and more broadly, to gain insight into ontologies as they relate to databases. It is meant to cover foundations, methodologies and applications of ontology- driven design, integration and management of databases in information systems and knowledge systems.

TOPICS

Topics of interest include but are not limited to:

- Ontology-driven database design
- Ontology-based database schema matching
- Ontologies for database integration
- Ontologies for accessing legacy databases
- Ontologies for automated query and reporting systems
- Ontologies for semi-structured data
- Ontologies for searching document databases
- Ontology-driven extraction of metadata or semantic annotations from documents
- Ontology-driven reasoning on metadata or semantic annotations
- Data filtering, cleaning, and summarization using ontologies
- Ontologies for database semantic interoperability
- Ontology-based mediation systems
- Data mining techniques using ontologies
- Ontology-driven knowledge discovery
- Ontology-based interpretation and validation of extracted knowledge
- Data and ontology alignment, integration, merge
- Ontology storage in databases
- Ontology elicitation from databases
- Ontologies, databases and distribution
- Applications, evaluations, and experiences in Scientific Databases, Web-based Information Systems Geographic IS, Bioinformatics, etc

ORGANIZING COMMITTEE

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SUBMISSION OF PAPERS

Symposium submissions must generally be in electronic form using Portable Document Format (.pdf), PostScript (.ps) or WinWord (.doc). Submissions must not exceed 8 pages for full length papers or 4 pages for research-in-progress proposals and they must be formatted using the VLDB format.

By submitting a paper, authors implicitly agree that at least one of them will register to the workshop and present the paper.

Papers must be submitted electronically using the Easychair submission system at
http://www.easychair.org/conferences/?conf=odbis2008

IMPORTANT DATES

Paper submission deadline: Mai 19, 2008
Notification of acceptance: June 20, 2008
Camera ready due: July 14, 2008
Workshop: August 25 (or August 29, to be confirmed), 2008
VLDB conference: August 24-30, 2008

WORKSHOP FORMAT

Each paper will be a 20-minutes presentation, followed by 10-minutes discussion and debate. The workshop will start with a talk by an invited speaker and will close with a panel to discuss key questions and topics that arise from the presentations. The panel will be multidisciplinary including researchers and practitioners from both academia and industry who have presented the best and/or most controversial papers.

Questions should be directed to the ODBIS organizers (odbis2008@sophia.inria.fr)