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RedBD: the Database Research Community in Spain

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1 Introduction

During the last decade, the Database research community in Spain has grown significantly in the quantity of groups interested in the area, and especially in the quality of those groups. Those database research groups are not in general very large; usually five or six full-time researchers compose them. The economic resources for supporting the researching activity came from public organisms like the Spanish government, the European Union or local governments, and in a less rate from the industry. Research is carried out mainly at the Informatics Departments of the Universities. As the different groups usually share research topics and also fields of applications, in the last years there has been an important movement to join research efforts.

Since 1996 the Database community has been sharing its experiences in the Spanish Software Engineering and Database Conference, called JISBD. In this conference, in addition of presenting the main results of the research projects, the groups have had the opportunity of discussing at round tables, and of participating at specific workshops. Moreover, well known invited lecturers coming from both industry and university, such as Alex Buchman, Hugh Darwen, Klaus Dittrich, Pitter Lockemann, R. Elmasri, Jim Melton, or Alberto Mendelzon, have participated on the conference. In the JISBD’2002 that took place in Almagro (a nice city of Castilla la Mancha), a group of database researchers decided to promote the research in this field by means of a Network of Excellence (NoE, for short). This was the birth of RedBD.

RedBD is a Spanish Database NoE, originally composed by fifteen universities (A Coruña, Alicante, Almeria, Castilla-La Mancha, Extremadura, Granada, Jaume I of Castellon, Malaga, Basque Country, Technical University of Catalonia, Technical University of Madrid, Valencia University of Technology, Rey Juan Carlos, Sevilla and Zaragoza) and three companies (Oracle Ibérica, Cronos Ibérica and CRC Information Technologies). Nowadays almost all Spanish research groups in the Database field are involved in the RedBD activities.

This NoE is supported by the Spanish Ministry of Science and Technology [TIC 2001-5079-E]. Its aim is to promote an active collaboration among different Spanish research groups in the Database and Information Management field. This collaboration is oriented in four directions: first, to improve the joint work in research projects and publications; second, to allow a fluent knowledge interchange of research topics; third, to create a group of reference for the database companies in Spain; and, finally, to achieve an international high level position in database research.

In this paper we sum up the groups that belong to RedBD as well as their main research topics and projects.

We do not need to remark the importance and impact of the database market. The IDC market research firm reported a global sales revenue of $11.1 billion for relational and object-relational databases and $211 million for object databases in 1999. Through 2004, IDC predicts annual growth rates of 18.2 percent for relational and object-relational databases and 12.5 percent for object databases (further details can be found in http://www.idc.com).

Additional information about projects and publications of all the research groups can be found at their respective web sites.

2 Research Groups of RedBD

As mentioned in the introduction, in the rest of this paper we are going to present the seventeen groups that belong to RedBD as well as their main research topics and projects.
2.16. TKBG: Temporal Knowledge Bases Group

TKBG is a research group of the Jaume I University sited in Castellón at the Mediterranean coast of Spain. The group was founded in 1997, and Dr. Rafael Berlanga leads it. TKBG consists of 8 researchers (3 faculties and 5 PhD students).

The main research areas of the group are Temporal Modeling, Storage and Retrieval of Structured Documents, Analysis and Exploitation of Temporal Information in Digital Libraries, XML and the Semantic Web. Recent research results of the group include the following: XML schema inference and evolution for heterogeneous repositories; Methods for the automatic summarization of topic-based clusters of documents; Temporal-semantic clustering of newspaper articles for event detection; Techniques for text mining using the hierarchical syntactical structure of documents; Extraction of temporal references to automatically assign document event-time periods; Techniques and tools for the temporal analysis of retrieved information; Analysis and exploitation of spatiotemporal knowledge in a semantic Web; Application to the research on Archaeology. Information about publications can be found at the web.

The research of the group is supported 50% by the government and 50% by private companies.

2.17. UEX Database Research Group

The members of the EXIS group are working in the University of Extremadura (Dep. of Computer Science). One research line, led by Dr. Antonio Polo Marquez, is focused on the data management and processing of documents issues. Some of the topics currently being investigated are Information Integration, Data Versioning, Temporal Databases, Multidimensional Indexing and applications of XML related with e-learning and Digital Libraries.

Another prominent research line is the Q-tree project, headed by Dr. Manuel Barrena, whose main goal is to make evolve a multidimensional access method in order to give efficient answer to searches in low- and medium-dimensional feature spaces. The Q-tree is currently being used as a motor search in Xerka.net, a commercial application to catalog text documents.

3 Conclusions and Main Activities in RedBD

In this paper we have presented RedBD, the Spanish network of excellence in database research. As can be observed, the Spanish research in DB includes a wide range of topics related with DB Modeling and Design, DB integration, Deductive and Intelligent DB, Mobile DB, DB Quality, Data Warehouse, XML DB, Digital Libraries, etc.

To promote the collaboration among the different database research groups in Spain, RedBD has carried out some activities including, workshops, invited lectures and round tables. In addition to support database research, RedBD has also teaching initiatives. At this moment, Spain is suffering an important change in the educational system to be adapted to the European Union System. With this aim, RedBD has elaborated a proposal of database curricula based on the well-known curricula. More information about that proposal can be found in the RedBD main Web page at http://kybele.esct.urjc.es/RedBD. Finally, we would be very pleased if we could join our RedBD in a World-RedBD.

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