The INFOMIX Information Integration System

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Information integration is the task of providing a uniform interface to various pre-existing data sources, so as to enable users to focus on specifying what they want, rather than thinking of how to obtain the answer. As a result, an information integration system frees the users from the tasks of finding the relevant data sources, interacting with each source in isolation, and selecting, cleaning, and combining data from multiple sources.

The INFOMIX project, which is supported by the European Commission FET Programme Project IST-2002-33570, aims at providing a solid theory and innovative methodologies for future flexible information integration systems. In particular, advanced reasoning capabilities by means of computational logic, handling of data beyond relational data (to some extent), declarative user interaction, possibilities to deal with incomplete and inconsistent data sources, extendibility and scalability are important and yet non-settled issues, which are tackled in this project.

The main goal of the INFOMIX project is to provide a set of techniques and associated tools for powerful information integration by using advanced reasoning capabilities. This comprises a *theory*, with an information model and information integration algorithms, and a *prototype implementation* of a knowledge-based system for advanced information integration, by using computational logic (and in particular, logic programming), and integrating research results on data acquisition and transformation.

In this talk, we briefly present the project and the main issues and questions addressed.