Henrik Legind Larsen Gabriella Pasi
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# Flexible Query Answering Systems

7th International Conference, FQAS 2006
Milan, Italy, June 2006
Proceedings

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# Preface

This volume constitutes the proceedings of the 7th International Conference on Flexible Query Answering Systems, FQAS 2006, held in Milano, Italy, on June 7-10, 2006. FQAS 2006 is preceded by the 1994, 1996 and 1998 editions, held in Roskilde, Denmark. More recently, FQAS 2000 was held in Warsaw, Poland, and the 2002 and 2004 editions were held in Copenhagen, Denmark, and in Lyon, France, respectively.

FQAS is the premier conference concerned with the very important issue of providing users of information systems with flexible querying capabilities and with an easy and intuitive access to information. More specifically, the overall theme of the FQAS conferences is the modelling and design of innovative and flexible modalities for accessing information systems. The main objective is to achieve more expressive, informative, cooperative, and productive systems which facilitate retrieval from information repositories such as databases, libraries, heterogeneous archives, and the Web.

The usual information systems are typically equipped with standard query languages or access modalities which are often inadequate to express user needs as well as to effectively visualize the retrieved results. FQAS is a multidisciplinary conference that draws on several research areas, including information retrieval, database management, information filtering, knowledge representation, computational linguistics and natural language processing, artificial intelligence, soft computing, classical and non-classical logics, and human–computer interaction.

Several fields are covered by the papers included in the conference proceedings among which are information retrieval, database management, query-answering, knowledge discovery and mining techniques, semantic Web technologies spanning from ontology and context modelling, user modelling and personalization.

These proceedings contain 60 original papers from various fields addressing key topics in FQAS. We wish to thank all contributors for their excellent papers and the referees, publisher, and sponsors for their efforts. We thank the organizers of the special sessions: Rita De Caluwe, Guy De Tré, Gabriella Kazai, Mounia Lalmas, Luis Iraola, Carolina Gallardo, and Jesús Cardeñosa. Special thanks also to the invited speakers: Stefano Ceri from Politecnico di Milano and Prabhakar Raghavan from Yahoo! Research. Finally, we extend our gratitude to the members of the International Advisory Board, the members of the International Program Committee, the additional reviewers, and the session chairs. All of them made the success of FQAS 2006 possible.

April 2006

Henrik Legind Larsen
Gabriella Pasi
Daniel Ortiz-Arroyo
Troels Andreasen
Henning Christiansen

# Organization

FQAS 2006 was organized by the Department of Informatics, Systems and Communication (DISCo) of the Università degli Studi di Milano Bicocca, Italy, and by the Department of Computer Science, Aalborg University Esbjerg in collaboration with the Center for TeleInFrastruktur (CTIF), Aalborg University. The local organization was done in cooperation with AEIT (Federazione di Elettrotecnica, Elettronica, Automazione, Informatica e Telecomunicazioni).

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# Problems and Challenges in the Integration of Semantic Services

Stefano Ceri

Politecnico di Milano

About eight years ago, as a reaction to the technologist view on the essential aspects of information management community (performance, performance, performance), I claimed that there were three fundamental problems in future of information systems: semantics, semantics, semantics. The claim is becoming more and more accepted as time goes by: the current work on the semantic Web the most visible example. However, while the need for semantics grows, the hope for achieving large, internationally adopted, shared semantic knowledge seems to decrease. Rather, the effort is concentrated on building semantic islands, which can be separately proved as being internally consistent and self-sufficient for simple tasks. Then, the interaction among such isolated worlds becomes the real hard problem to solve.

In this talk, after giving some general background, I will focus on interoperability among semantic services, specifically focusing on search services. I will start from the observation that search services can become very strong in their specific semantic domain, e.g. give very good instruments for extracting knowledge from a given semantic island. However, they currently do not allow higher order search, i.e., the ability to either distribute a high level query to the right service, or to integrate results of the search into a single result. My classical example, also presented as a challenge at a recent workshop, is find an ethnical restaurant in a nice place close to Milano; the problem hinted by this example is that we may perhaps be able to find a geo-localization service understanding how close is a nice place from Milano or a trusted restaurant guide returning us a description of the food being served by restaurants together with their location. However, answering this query at the current state-of-the-art requires a strong involvement of a knowledgeable user, who should inspect the search services one at a time, feeding the results of one search as input to the next one, until he gets a reasonable answer. We will discuss how to approach this problem in a way that offers to users the impression of a higher-order search engine which performs some of the integration required by the query, thereby trying to build a bridge between semantic islands, and we will hint to other research efforts which show some common aspects with this approach.

# The Changing Face of Web Search

Prabhakar Raghavan

Yahoo! Research

Web search has come to dominate our consciousness as a convenience we take for granted, as a medium for connecting advertisers and buyers, and as a fast-growing revenue source for the companies that provide this service. Following a brief overview of the state of the art and how we got there, this talk covers a spectrum of technical challenges arising in web search - ranging from spam detection to auction mechanisms.

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