

In Memory of Professor Yahiko Kambayashi

Prof. Kambayashi was for many years an active member of the IFIP 2.6 Working Group, which organized the conference whose proceedings make up this volume.

Prof. Kambayashi suddenly passed away in February 2004. He leaves us with the memory of a wonderfully competent, energetic and kind colleague.

The members of the Working Group are very sad to lose one of their best friends. They wish to offer this volume to his memory as a testimony of their esteem for the late Prof. Kambayashi.

		
		
		
		
		
		

Preface

The explosion in data exchange fostered by the success of the Web has restated semantics as a kernel issue in the development of services providing data and information to users and applications worldwide. This newly designated conference series on “Semantics for the Networked World” unifies into a single framework the previous series on “Database Semantics” and “Visual Database Systems” that the IFIP WG 2.6 has been offering since 1985. Whereas the intent of the conference series is to explore interesting research issues related to semantics, the theme for the 2004 edition is “Semantics for Grid Databases”. Grid computing, a new field concentrating on “flexible, secure, coordinated resource sharing among dynamic collections of individuals, institutions, and resources (also referred to as virtual organizations)”, has gathered momentum in the context of providing shared infrastructures for large-scale scientific computations and data analysis. Similarly, P2P computing has attracted substantial attention.

Currently, attention is devoted to the provision of middleware services to make computational resources interoperable at the technical level and to increase the efficiency of use of physical resources. However, as Grid and P2P computing infrastructures are being increasingly adopted, they are likely to have typical problems of information overload that manifest themselves in any large-scale infrastructure for information and application sharing (e.g., the WWW). The need for resource discovery, application and service interoperability, integration and composition manifest themselves in these infrastructures. The ability to interoperate at the semantic level will largely determine the continued success and utilization of these infrastructures.

This working conference focused on issues of semantic interoperability of the information and services provided and manipulated by Grid and P2P computing systems. The purpose of the conference, as for its predecessors, was to provide an active forum for researchers and practitioners for presentation and exchange of research results and practical management of databases, this time applied to large-scale systems used for managing and sharing scientific information. The technical program of the conference, which was held during June 17–19, 2004 in Paris, represented the state of the art in developing principles and practices related to the management of semantics in large-scale networked (Grid and P2P) information infrastructures. It featured two invited talks, by Norman Paton (Databases and the Grid: JDBC in WSDL, or Something Altogether Different?) and Karl Aberer (Emergent Semantics Systems), a tutorial by Dave Berry (The State of the Grid), and a panel on “What Can and Should We Do for the Grid?”. The rate of acceptance of the research track was 1 out of 3, and the papers were presented in the following sessions: integration, peer-to-peer computing, semantics for scientific applications, interoperability and mediation, and global services and schemas. This was followed by a posters program that sought to showcase research ideas that are in various stages of progress and show promise.

Finally, the conference chairs would like to thank all the people who worked hard to bring this conference into being. This includes the members of the Program Committee, the invited and tutorial speakers and the authors of the various submissions who put forth their research ideas. Last, but not least, we would like to thank the local organizers in Paris — Daniela Grigori, Stéphane Lopes and Annick Baffert — whose efforts made this conference feasible and operational. We hope the attendees had stimulating and interesting exchanges of innovative ideas, possibly with some meaningful advances in this new and emerging area of research.

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