

Preface

ICIW 2010

The Fifth International Conference on Internet and Web Applications and Services (ICIW 2010) held between May 9-15, 2010 in Barcelona, Spain, continued a series of co-located events that cover the complementary aspects related to designing and deploying of applications based on IP&Web techniques and mechanisms.

ICIW 2010 was composed of five complementary tracks. They focused on Web technologies, design and development of Web-based applications, and interactions of these applications with other types of systems. Management aspects related to these applications and challenges on specialized domains were considered. Evaluation techniques and standard position on different aspects were also part of the agenda.

Internet and Web-based technologies led to new frameworks, languages, mechanisms and protocols for Web applications design and development. Interaction between web-based applications and classical applications requires special interfaces and exposes various performance parameters.

Web Services and applications are supported by a myriad of platforms, technologies, and mechanisms for syntax (mostly XML-based) and semantics (Ontology, Semantic Web). Special Web Services based applications such as e-Commerce, e-Business, P2P, multimedia, and GRID enterprise-related, allow design flexibility and easy to develop new services. The challenges consist of service discovery, announcing, monitoring and management; on the other hand, trust, security, performance and scalability are desirable metrics under exploration when designing such applications.

Entertainment systems became one of the most business-oriented and challenging area of distributed real-time software applications' and special devices' industry. Developing entertainment systems and applications for a unique user or multiple users requires special platforms and network capabilities.

Particular traffic, QoS/SLA, reliability and high availability are some of the desired features of such systems. Real-time access raises problems of user identity, customized access, and navigation. Particular services such interactive television, car/train/flight games, music and system distribution, and sport entertainment led to ubiquitous systems. These systems use mobile, wearable devices, and wireless technologies.

Interactive game applications require particular methodologies, frameworks, platforms, tools and languages. State-of-the-art games today can embody the most sophisticated technology and the most fully developed applications of programming capabilities available in the public domain.

The impact on millions of users via the proliferation of peer-to-peer (P2P) file sharing networks such as eDonkey, Kazaa and Gnutella was rapidly increasing and seriously influencing business models (online services, cost control) and user behavior (download profile). An important fraction of the Internet traffic belongs to P2P applications.

P2P applications run in the background of user's PCs and enable individual users to act as downloaders, uploaders, file servers, etc. Designing and implementing P2P applications raise particular requirements. On the one hand, there are aspects of programming, data handling, and intensive computing applications; on the other hand, there are problems of special protocol features and networking, fault tolerance, quality of service, and application adaptability. Additionally, P2P systems

require special attention from the security point of view. Trust, reputation, copyrights, and intellectual property are also relevant for P2P applications.

On-line communications frameworks and mechanisms allow distribute the workload, share business process, and handle complex partner profiles. This requires protocols supporting interactivity and real-time metrics.

Collaborative systems based on online communications support collaborative groups and are based on the theory and formalisms for group interactions. Group synergy in cooperative networks includes online gambling, gaming, and children groups, and at a larger scale, B2B and B2P cooperation. Collaborative systems allow social networks to exist; within groups and between groups there are problems of privacy, identity, anonymity, trust, and confidentiality. Additionally, conflict, delegation, group selection, and communications costs in collaborative groups have to be monitored and managed. Building online social networks requires mechanism on popularity context, persuasion, as well as technologies, techniques, and platforms to support all these paradigms.

During the last years, different web applications based on the use of Internet environments have been introduced to help teachers and students in the learning-teaching process. These web applications, mainly supported by Internet systems and services, are changing the traditional educational process not only in Higher Education (HE) qualifications, but also in open learning for any type of course. Nowadays, there exist different public and commercial Virtual Learning Environments (VLE) aimed at helping teachers to manage courses and contents, as well as to support the students' learning process. In this sense, VLE are an important factor contributing towards the change from traditional educational methodologies to new paradigms including active teaching. This implies not only a shift in the way of tackling learning and teaching, but also new challenges for software engineers and developers. Virtual Learning Environments have to be built bearing in mind their mandatory use through the Internet, thus requiring important characteristics and capabilities such as security, good latency, several tools for interoperability, storage management, etc.

Also, the age of information and communication has revolutionized the way companies do business, especially in providing competitive and innovative services. Business processes not only integrate departments and subsidiaries of enterprises but are also extended across organizations and interact with governments. On the other hand, wireless technologies and peer-to-peer networks enable ubiquitous access to services and information systems with scalability. This results in the removal of barriers of market expansion and new business opportunities as well as threats. In this new globalized and ubiquitous environment, it is of increasing importance to consider legal and social aspects in business activities and information systems that will provide some level of certainty. There is a broad spectrum of vertical domains where legal and social issues influence the design and development of information systems, such as web personalization and protection of users privacy in service provision, intellectual property rights protection when designing and implementing virtual works and multiplayer digital games, copyright protection in collaborative environments, automation of contracting and contract monitoring on the web, protection of privacy in location-based computing, etc.

We take here the opportunity to warmly thank all the members of the ICIW 2010 Technical Program Committee as well as the numerous reviewers. The creation of such a broad and high quality conference program would not have been possible without their involvement. We also kindly thank all the authors who dedicated much of their time and efforts to contribute to ICIW 2010. We truly believe that, thanks to all these efforts, the final conference program consisted of top quality contributions.

This event could also not have been a reality without the support of many individuals, organizations, and sponsors. We are grateful to the members of the ICIW 2010 organizing committee for their help in handling the logistics and for their work to make this professional meeting a success.

We hope that ICIW 2010 was a successful international forum for the exchange of ideas and results between academia and industry and for the promotion of progress in the area of Internet and Web applications and services.