EDITORIAL

The IADIS International Journal on Computer Science and Information Systems (IJCSIS) is a peer-reviewed scientific journal published exclusively in an electronic form. Its mission is to publish original contributions pertaining to the topics of Applied Computer Science, Information Systems and their Applications, to disseminate knowledge amongst its readers and to be a reference publication. The IADIS IJCSIS publishes original research papers and review papers, as well as auxiliary material such as: short ongoing research papers, case studies, conference reports, management reports, book reviews and commentaries.

This issue (ISSN: 1646-3692) compounds 9 original papers that join together research covering the wide spectrum of Computer Science and Information Systems and their applications. The authors' contributions embrace important research topics and intend to provide a current depiction of research in the field and present their own empirical conclusions, while providing opportunity for future work.

The first paper in this volume by Derek O'Reilly (Dundalk Institute of Technology, Ireland) entitled HOW AWARE ARE PRIMARY SCHOOL CHILDREN TO THE DANGERS OF THE INTERNET? explores the dangers primary school children might be exposed to when using the internet. The growing deployment of technology in primary schools brings new opportunities, but can simultaneously put children at risk if they are not aware of the existing internet perils. The author assesses children's awareness to these dangers and concludes they are not able to understand the potential menaces of exploring the internet, advocating that the society, adults and the government should take responsibility for creating mechanisms to protect and educate them to safely use the internet.

The second paper by Lia Carrari Rodrigues and Pollyana Notargiacomo Mustaro (Universidade Presbiteriana Mackenzie, Brazil) titled SOCIAL NETWORK ANALYSIS OF VIRTUAL COMMUNITIES IN ONLINE GAMES studies the development of communities constructed around virtual games by applying the graph theory and the aspects relevant to the analysis of social networks. The increasing use of Massive Multiplayer Online Role-Playing Game (MMORPG) has been at the origin of true communities built on the relationships between players. The study presented on this paper was conducted with players from a game introduced in Brazil in 2004, Ragnarök Online. The conclusions of this type of analysis are important to provide a deeper insight of network behavior patterns useful to guide marketing promotions, the improvement of communication features or the creation of innovative MMORPGs.

The third paper by Pradip K. Sarkar and Mohini Singh (RMIT University, Australia), NARROWING THE DIGITAL DIVIDE: THE AUSTRALIAN SITUATION focuses on one of the obstacles for the successful implementation of e-government, the existing digital divide. The paper addresses the challenges of the digital divide in developed countries and particularly in Australia. The authors explore the existence of a digital divide in Australia, despite its economical and technological progress and propose measures to minimise this division and encourage people to employ ICT-based applications. E-government can play an important part in this minimisation, since the services the government offers are every citizen's right and it has been creating mechanisms to promote and assist the citizens' access to these services.

The fourth contribution by José Miguel Canino Rodríguez, Luis Gómez Déniz (Universidad de Las Palmas de Gran Canaria, Spain), Jesús García Herrero (Universidad Carlos III, Spain) and Juan Besada Portas (Universidad Politécnica de Madrid, Spain), titled EATS: AN AGENT-BASED AIR TRAFIC

SIMULATOR introduces the EATS, an Experimental Air Traffic Simulator, designed as a Multi-Agent System and executed on a JADE framework. This simulator intends to be an instrument for the preliminary assessment of flight procedures, man-machine interfaces and algorithms. The EATS was created to simulate situations with numerous aircrafts performing their particular flight plans under the instruction of a traffic controller.

The fifth paper by Lamia Hadrich Belguith, Jamel Kolsi and Abdelmajid Ben Hamadou (Faculty of Economic Sciences and Management of Sfax , Tunisia) AUTOMATIC KNOWLEDGE EXTRACTION AND MATCHING: APPLICATION TO MANAGEMENT ENGINEERING DIAGNOSIS proposes a system named SADIM (Système d'Aide au Diagnostic d'Ingénierie de Management) based on an innovative approach for automatic knowledge extraction and matching. This system was designed to identify anomalies in enterprise management and it permits knowledge acquirement from textual data associated with the diagnosis, the matching and the allocation of witness sentences to the equivalent core ideas. The SADIM can also be used to assist specialists and management consultants to make decisions for the attainment of the necessary standards by enterprises.

The sixth paper by Mohammad M. Alsuraihi and Dimitrios I. Rigas (University of Bradford, United Kingdom) MULTIMODAL INTERFACE DESIGN: AN EMPIRICAL INVESTIGATION ON EFFICIENCY presents a study designed to compare the effectiveness of multimodal interaction employing vocal instruction and speech, together with a minimal use of the mouse and the keyboard, against the effectiveness of resorting to visual-only interaction metaphors for deploying interface-design environments. The criteria used for this comparison were task completion time and frequency of error. The authors concluded that the use of voice and aural interaction metaphors together with a minimal use of the mouse and the keyboard can notably improve the effectiveness of interface design when it comes to tasks' accomplishment time and occurrence of error.

The seventh contribution by Hannah Thinyane, Ingrid Siebörger and Cheryl Hodgkinson-Williams (Rhodes University, South Africa) AN INVESTIGATION INTO THE USE OF INTERACTIVE WHITEBOARDS IN SOUTH AFRICAN SCHOOLS portrays two case studies conducted, as part of a viability study done for the Eastern Cape Department of Education (ECDoE), to assess the advantages and disadvantages of the usage of interactive whiteboards in schools in South Africa. The authors itemise seven criteria to successfully integrate interactive whiteboards in educational settings. They isolated one of the criteria, the change in pedagogical practice, as being the most determinant of the seven, arguing that what is decisive in the successful integration of interactive whiteboards is a transformation in the way teachers perceive, source and teach classes.

The eight paper by Sophie Nichol (School of Engineering and Information Technology, Australia) EXPLORING CREATIVITY SUPPORT SYSTEMS FOR THE NE"X"T GENERATION examines the implementation of a Creativity Support System (CSS) for third year students taking the Games Design and Development course at the Deakin University in Australia. The CSS is a tool deployed to help build creativity. It is designed to use a multiplicity of factors, to enhance creativity in people, to avoid concentrating exclusively on one element, since this is restrictive and does not take into account social aspects, for example. This research explores a set of elements that the CSS should use to facilitate creativity, having the author concluded that social factors are especially relevant in the development of creativity.

The ninth paper by Visara Urovi, Stefano Bromuri, Jarred McGinnis, Kostas Stathis (Royal Holloway University of London, United Kingdom) and Andrea Omicini (Università di Bologna, Italy) AUTOMATING WORKFLOWS USING DIALECTICAL ARGUMENTATION puts forward a multi-agent system framework founded on an argumentative agent technology with the purpose of automating the workflow selection and execution. In the proposed framework the selection of the workflow is managed by agent interactions guided by the laws of a dialogue game that aims to assess the workflow's properties using argumentation. After the workflow has been selected, it is executed by dynamically configuring workflow engines to direct workflow activities.

These papers portray both social and technological aspects of research done on Applied Computer Science, Information Systems and their Applications and contribute with the work they've developed to the enrichment of this field. The review of the relevant literature adds to the theoretical foundation of these areas and the innovative empirical research on different technologies creates opportunity for the emergence of original findings.

The Editors,

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