

EDITORIAL PREFACE

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The third issue of the fourth volume comprises four articles, selected after a careful review process, and is organized as follows.

In the first article, Dobre et al, present an eFramework designed to improve the communication between the citizens or businesses and the public administration. Using this framework the governments can offer eServices to its citizens, as well as the possibility to interact with various public govern-level services, without the need to directly interact with the involved institutions. Authors present the architecture as well as technical details for the implementation of such a framework. A pilot application has been produced using state-of-the-art technologies such as InfoPath, SharePoint, BizTalk, and Web Services.

In the second article, Curé et al, focus on NoSQL in the context of big data. Authors acknowledge that most research in the area focus on proposing more schemas, supporting adapted declarative query languages and providing integrity constraints in order to control data consistency and enhance data quality. Authors consider that these issues can be dealt with in the context of Ontology Based Data Access (OBDA). OBDA is a new data management paradigm that exploits the semantic knowledge represented in ontologies when querying data stored in a database. Authors provide a proof

of concept of OBDA's ability to tackle these three issues in a social application related to the medical domain.

In the third article, Vieira et al, describe that a common approach used for testing the performance of opportunistic protocols relies on existing opportunistic contact traces. Studying the contact patterns between nodes can lead to useful observations to take into account in future experiments. In this paper, authors present the results of a study on four different datasets. First, they describe the main characteristics of each trace. Then, authors propose a graphical representation of the contact behavior for each pair of nodes which reveals that contacts follow a roughly lognormal distribution and that there is a small group of nodes in each set which is seemingly much more popular than the rest. Authors also introduce a temporal analysis that was made over the duration of each collection experiment. It was noticeable that individual nodes have repetitive contact patterns over time, apart from some observed cyclic variation over time.

In the fourth paper, Kotis and Katasonov explain that Internet of Things (IoT) should be able to integrate an extremely large amount of distributed and heterogeneous entities. To tackle heterogeneity, these entities will need to be consistently and formally represented

and managed through suitable abstraction technologies. Within this context, authors present the Semantic Smart Gateway Framework for supporting semantic interoperability between these types of heterogeneous IoT entities. More specifically, the paper describes an ontology as the key technology for the abstraction and semantic registration of these entities, towards

supporting their automated deployment. The paper presents a use case scenario and a proof-of-concept implementation.

The editor wishes to thank the authors for their contribution to this issue and the reviewers for their useful suggestions and feedback to the authors. I wish readers found this issue useful in their research and academic activity.

Nik Bessis is currently a Head of Distributed and Intelligent Systems (DISYS) research group, a Professor and a Chair of Computer Science in the School of Computing and Mathematics at University of Derby, UK. He is also an academic member in the Department of Computer Science and Technology at University of Bedfordshire (UK). He obtained a BA (1991) from the TEI of Athens, Greece and completed his MA (1995) and PhD (2002) at De Montfort University (Leicester, UK). His research interest is the analysis, research, and delivery of user-led developments with regard to trust, data integration, annotation, and data push methods and services in distributed environments. These have a particular focus on the study and use of next generation and grid technologies methods for the benefit of various virtual organizational settings. He is involved in and leading a number of funded research and commercial projects in these areas. Prof. Bessis has published over 180 papers, won 3 best paper awards and is the editor of several books and the Editor-in-Chief of the International Journal of Distributed Systems and Technologies (IJ DST). In addition, Prof. Bessis is a regular reviewer and has served several times as a keynote speaker, conferences/workshops/track chair, associate editor, session chair and scientific program committee member.