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Introductory Editorial

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ABSTRACT

The Open Journal of Databases (OJDB) is a new open access journal covering all aspects of database research and technology. In this editorial, the first issue of the journal is presented.

TYPE OF PAPER AND KEYWORDS

Editorial: *open access, OJDB*

1 INTRODUCTION

The Open Journal of Databases (OJDB) is a new editorial adventure —which I accepted to lead with enthusiasm— that faces the challenge of the Open Access publication paradigm in the rather consolidated field of database research and technology.

Open Access is the new frontier of scholarly publishing, making journal articles online available to worldwide readers free of charge [1]. Several advantages of Open Access have been recognized for different stakeholders in the system of scholarly communications [2]. In particular, it has been shown as it helps increase the level of visibility and impact for researchers and their work, measured as number of citations and article downloads. For instance, in the computer science field, the study [3] reports a 157% increase in the number of citations for papers published under the Open Access model.

Last but not least, providing free online access to the literature necessary for research represents a great opportunity for the developing countries, particularly in Africa, where subscriptions may be prohibitively expensive for institutions. Furthermore, the OJDB publisher also offers a fee waiver for authors who do not have funds to cover publication fees. In this context, the still remaining barrier to knowledge sharing could be though the digital divide keeping billions of people, including millions of serious scholars, offline [4].

However, also disadvantages of Open Access have been evidenced. The main argument against the "author-pays-for-publication" model is the possible damage to the peer review system, as also evidenced in some experiments [5], which would result in a serious detriment to the overall quality of scientific journal publishing. This danger has been limited in recent years by the emergence of new professional open-access publishers that take quality issues in high regard, as they also have to build their reputation on the ground. The OJDB publisher adheres to the highest standards of publishing ethical behaviour, which also provide for the use of plagiarism detection tools to verify the originality of submissions. In any case, the main guarantee for readers and prospective authors is the existence of a solid editorial board and the adoption of a rigorous peer review system. The OJDB journal has a very strong editorial board, whose quality composition has been one of the reasons convinced me soon to accept the Editor-in-Chief appointment, and it is then part of my mission, rather than just one of my duties, to act a as guarantor of the application of a rigorous peer reviewing.

Another issue that might possibly discourage prospective authors is the fact that, sometimes, authors have to cede their copyright to publishers. However,

this is not the case of OJDB, where authors retain their rights under the Creative Commons Attribution License [6].

In conclusion, my hope is that, based on these premises, the OJDB journal will continue to attract high quality submissions, as it actually was for this first issue, although the competition with other new open-access editorial initiatives as well as with established journals in the database field is very strong.

2 CONTENTS OF THE FIRST ISSUE

The first issue of the journal contains two excellent research articles, which I am proud to introduce.

In "Eventual Consistent Databases: State of the Art", Elbushra and Lindström study the use of the eventual consistency paradigm in database systems. In the context of data management in cloud environments, the eventual consistency model is becoming widely used in large distributed relational and also NoSQL databases available in the cloud and is rapidly gaining importance for applications. The authors introduce the eventual consistency model, review and evaluate existing databases adopting it (MongoDB, CouchDB, Amazon SimpleDB, DynamoDB, Riak, DeeDS and Zatara), then discuss the advantages and disadvantages of eventual consistency and identify future research challenges.

In "Designing a Benchmark for the Assessment of Schema Matching Tools", Duchateau and Bellahsene address the assessment of schema matching tools via the proposal of a reference benchmark. Although schema matching has been a fundamental task in heterogeneous database integration for several years, a common platform for uniformly comparing different approaches was still lacking. Therefore, the authors propose XBenchMatch, which enables the assessment of schema matching tools by integrating new measures for evaluating the post-match effort as well as the quality of the resulting integrated schema, and is equipped with several datasets to best suit different application requirements and environments. Experiments with the proposed benchmark shed light on quality and performance of the state-of-the-art schema matching tools and open new research perspectives for the design of the next generation of tools.

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Fabio Grandi received a Laurea degree in Electronics Engineering and a PhD in Electronics Engineering and Computer Science from the University of Bologna, Italy. He is currently an Associate Professor of Information Systems in the School of Engineering and Architecture of the University of Bologna. From 1989 to 2001 he worked at the CIOC/CSITE centre of the Italian National Research Council (CNR) in Bologna in the field of neural networks and temporal databases, initially supported by a CNR fellowship. In 1993 and 1994 he was an Adjunct Professor at the Universities of Ferrara, Italy, and Bologna. In the University of Bologna, he was with the Dept. of Electronics, Computers and Systems (DEIS) from 1994 to 1998 as Research Associate, and as Associate Professor from 1998 to 2012, when he joined the new Dept. of Computer Science and Engineering (DISI). His scientific interests include temporal, evolution and versioning aspects in data management, WWW and Semantic Web, knowledge representation, storage structures and access cost models. He serves as Editor-in-Chief of the Open Journal of Databases.