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Editorial

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Biographical notes: Lorna Uden is Professor Emeritus of IT Systems in the Faculty of Computing, Engineering and Technology at Staffordshire University. Her research interests include technology learning, HCI, big data, mobile learning, activity theory, knowledge management, web engineering, multimedia, e-business, service science and innovation, semantic web, software as a service (SaaS) and problem-based learning.

Welcome to V9 N1 of this journal. This issue consists of three papers. The first paper is, 'Structural convergence of web graph, social network and malaria network: an analytical framework for emerging web-hybrid search engine' by Monday Eze, Jane Labadin and Terrin Lim. This paper presents a framework for developing a search engine that discovers the reservoirs of infectious malaria vectors using contact network modelling. It is based on the fact that every malaria transmission involves malaria vector contacts with human beings through mosquito bites. They examined the three knowledge domains: social networks, web graph (a network link of websites), and malaria network with the intention of establishing their structural similarities. The overall aim will be to use the result of such comparative analysis to build a framework that will give rise to a hybrid search engine for malaria networks. It is a pity that there is no evaluation of results because the work is still in progress.

The second paper is, 'Datatype evolution on RDF ontologies' by Anastasia Analyti and Ioannis Pachoulakis. The paper deals with the case of XSD datatype evolution, in the general context of ontology evolution. The authors are interested in the effects of the migration of literal-valued instance triples of an RDF KB to a new ontology version. They authors began with a review of the primitive XSD datatypes and the derived XSD datatypes, the latter being derived from the primitive XSD datatypes or other derived XSD datatypes through facet restriction. They then defined datatype evolution (e.g., from integer to decimal, from float to double, from date to dateTime, from a facet-restricted integer to a more general facet-restricted integer, from an enumerated datatype to a more general datatype, etc.) and show how the XSD-valued instance triples are automatically migrated to the new ontology version, where the datatype of their associated property may have evolved. In addition, specialised algorithms are presented. It would be good to generalise the approach to consider all migrated instance descriptions and not only the XSD-valued ones.

The final paper is 'Tool support for generating model-based test cases via web' by Alessandro Arantes, Valdivino Alexandre de Santiago Júnior, Nandamudi Lankalapalli Vijaykumar and Erica Ferreira de Souza. This paper presents a tool, WEB-PerformCharts

2.0 focused on supporting a single aspect of distributed software development: the activity of generating test cases via web. According to these authors, WEB-PerformCharts 2.0 can be used to generate test cases for any kind of reactive system modelled in statecharts or FSM. The authors present three case studies in different application domains to demonstrate the feasibility of their tool. Two of these case studies are real space research projects under development at the Brazilian Instituto Nacional de Pesquisas Espaciais (INPE – National Institute for Space Research). It would be useful to have a graphical user interface so that the test designer does not need to translate the statecharts model into an XML-based language (PcML). As well as addressing the issue of scalability.