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 V8N3 of this journal. This issue consists of four papers. The first paper is 'A modelling framework for social media monitoring' by Alexander Semenov and Jari Veijalainen. The authors in the first paper describe a hierarchical, three-level modelling framework for monitoring social media. Immediate social reality is modelled through the first level of the models. They represent various virtual communities at social media sites and adhere to the social world models of the sites, i.e., the 'site ontologies'. The second-level model is a temporal multirelational graph that captures the static and dynamic properties of the first-level models from the perspective of the monitoring site. The third-level model consists of a temporal relational database scheme that models the temporal multirelational graph within the database. The models are specified and instantiated at the monitoring site. According to these authors, the important contribution of the paper is the description of the mappings between the modelling levels and their schematic algorithmic implementation within the monitoring site. The paper also describes theoretical limits for the accuracy and timeliness of monitoring activity, assuming that the monitoring is performed remotely over the internet. Further empirical studies are needed to validate the effectiveness of the model.

The second paper is 'Tabula: a web-based coordination tool integrating task structure overviews and minimalist task workspaces' by Victor Kaptelinin and Patrik Björnfot. The paper describes the design, implementation, and tentative evaluation of a web-based coordination tool named Tabula. The tool employs a shared representation that has the form of a task/participant table. Individual cells of the table are designed as minimalist interactive workspaces, each supporting a particular user in performing a particular task. Integrating overviews of the overall structure of participants' tasks with task management features within a single representation is intended to help the user identify pending tasks, facilitate access to task-related resources, and support an automatic update of projects' visual representations. A prototype of the tool has been evaluated within an informal web-based course.

According to these authors, the evidence obtained in the evaluation study show two main conclusions. The first conclusion is related to the basic concept of embedding minimalist task workspaces into overview representations of project task structures. The evidence suggests that the concept offers a potentially useful strategy for bridging the gap

between choosing a task and actually working on the task. The second conclusion is related to the concrete implementation of the underlying concept. It is apparent that the approach adopted in Tabula, – using icons rather than text, – may support a more efficient use of the screen space, but also makes it difficult for some users to understand the meaning of screen objects. It would be useful to conduct more empirical studies.

The third paper is 'Tasklets: enabling end user programming of web widgets' by Geetha Manjunath, M. Narasimha-Murty and Dinkar Sitaram. According to these authors, mobile widgets are now popular and form a new paradigm of simplified web. Probably, the best experience of the web is when a user has a widget for every frequently executed task, and can execute it anytime, anywhere on any device. However, creating a widget today requires knowledge of programming, web technologies and protocols. In this paper, the authors propose a new method of web simplification that enables an end-user to create simple 'single-click' widgets for a personal task – without any programming. For this they have introduced a new concept called Tasklet to represent a user's personal interaction and model it using an instruction set over websites. These Tasklets can be programmed by demonstration and are executed using a web virtual machine that virtualises changes to web pages. Manjunath, Narasimha-Murty and Sitaram argue that their approach opens up a different perspective of the WWW as not just a 'web of pages', but a 'web of tasks'. It would be useful to have natural language to invoke Tasklets.

The last paper is 'On topological structure of web services networks for composition' by Chantal Cherifi and Jean-François Santucci. Cherifi and Santucci argue that to deal efficiently with the exponential growth of the web services landscape in composition life cycle activities, it is necessary to have a clear view of its main features. Because there are many interacting entities, the complex networks paradigm is an appropriate approach to analysing the interactions between the multitudes of web services. In their paper, they present and investigate the main interactions between semantic web services models from the complex network perspective. Results show that both parameter and operation networks exhibit the main characteristics of typical real-world complex networks such as the 'small-world' property and an inhomogeneous degree distribution. According to these authors, the results yield valuable insights to developing composition search algorithms, to deal with security threats in the composition process and on the phenomena which characterise its evolution. It would be good to extend the work to use networks topology knowledge for composition search.