
Editorial

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Biographical notes: Lorna Uden is a Professor Emeritus of IT Systems in the Faculty of Computing, Engineering and Technology at the 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), internet of things and problem-based learning.

Welcome to V12N4 issue. There are four papers in this issue. The first paper is 'A Web 2.0-based internal crowdsourcing solution for tacit knowledge externalisation in enterprises' by Shreyas Suresh Rao and Ashalatha Nayak. According to these authors, tacit knowledge externalisation (TKE) is a vital business process used in decision-making, business innovation and problem-solving activities within an enterprise.

They also established a case study in order to demonstrate the feasibility, and will show the progress of the proposed approach. The implementation has also revealed some technical aspects. The authors of this paper propose a Web 2.0-based internal crowd sourcing workflow that provides a generic and flexible structure for the process of externalisation. The workflow comprises crowd creation, crowd opinion, crowd voting, crowd wisdom and crowd learning phases, which encompass knowledge elicitation, sharing and utilisation activities that occur during the externalisation process. The workflow is implemented as an ASP.NET web application titled 'TKApp', measured using the certainty-factor model and demonstrated for a decision-making scenario in a start-up company. The core logic of the workflow is developed as a SOAP-based web service and deployed publicly, thus empowering any enterprise to reuse the service for externalisation purposes. It is a pity that there is no evaluation of the research. Future work should include:

- a testing the TKApp application for larger datasets of crowd experts, in other domains
- b proposing a certainty-factor based incentive scheme for the internal crowd sourcing approach.

The second paper is 'Knowledge extraction from web-based consumer surveys: Bayesian networks with feature selection' by Yoko Ishino. Ishino argues that extracting useful knowledge from consumers' survey data is a very important process in marketing. This knowledge can help a marketing expert (or a marketer) make decisions when developing new products or revising existing products. This study proposed a method of extracting useful knowledge from questionnaire data by performing Bayesian network modelling

after feature selection in which Cramer's V is used as an information index for problems with multiple objective variables. The proposed method is suitable for a large-scale web-based consumer survey.

The proposed method was verified by a case study using practical questionnaire data. The purpose of the proposed method is not only to accurately classify the objective variables, but also to extract useful knowledge regarding consumers' attitude and behaviour. According to the author, the proposed method showed good performance. The limitation of the proposed method is that this method needs a considerable amount of data. Organising the outcome information into a more understandable format is necessary to help people in the business field. This is an area in which the proposed method can be further improved. More empirical studies are also required.

The third paper is 'Digital group storytelling in knowledge management: lessons learned in online tutoring' by Maria Teresa A. Gouvêa, Flavia Maria Santoro and Claudia Cappell. According to these authors, organisations have benefited from the use of storytelling in several contexts. The adoption of this activity has been a successful approach to promote the communication among employees and help them to better understand organisational goals and/or changing processes, as well as give support to knowledge management. Storytelling is an important tool to register lessons learned whose usage has increased in organisations and education. Organisations tend to produce knowledge from work experience, as well as from daily activities or special projects. Group storytelling is a technique to support externalisation of tacit knowledge through the collaborative construction of stories.

The paper discussed the use of the group storytelling technique in the context of knowledge management of an educational institution. The case reported in this study showed that narratives can be excellent vehicles for communication and dissemination of knowledge and when supported by a computer system can generate positive results. These authors argue that results obtained show that group storytelling has great potential to register the lessons learned. It is necessary to conduct further research to validate the results. There should also be research to investigate models for supporting trust among the tellers and the stories being told.

The last paper is 'A multi-agent based security policy for web related applications: a hybrid approach using context and ontology' by Haoua Cheribi, Abdelkrim Bouramoul and Mohamed Khireddine Kholadi. The authors of this paper present a multi-agent system model based on securing computer systems that operate in complex and pervasive environments, such as web applications. Multi-agent systems paradigm is suitable because of their ability to cope with autonomy, flexibility and scalability.

In this paper the authors propose a hybrid approach considering the execution context to express the circumstances and conditions of the environment. The purpose is to better interact with users and respond effectively to the posed situation. The use of ontologies also enriches the considered system by semantics, strengthens the proposed approach by increasing the objectivity and overcomes any ambiguities caused by the heterogeneity of the different intervening entities. By considering the contextual and semantic aspects of the system allow us to ensure effective and relevant results. A case study is used to demonstrate the feasibility of the proposed approach. Further evaluations with more empirical data are needed to verify the proposed approach.