Journal of Universal Computer Science, vol. 16, no. 7 (2010), 1004-1005
submitted: 12/3/10, accepted: 29/3/10, appeared: 1/4/10 © J.UCS

Collective Intelligence with Visualization and Multimedia

J.UCS Special Issue

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The aim of collective intelligence is to integrate single intelligence of individuals for dealing with highly complex problems [Levy 1994]. In practice, Web 2.0 applications like blogs and wikis have been developed to implement the collective intelligence. Such influences by collective intelligence have been an important issue in various knowledge-enhanced applications, e.g., information retrieval [Jung 2009a], semantic web [Jung 2008b, Jung 2008a], e-business [Jung 2009c], and e-learning [Gan and Zhu 2007, Jung 2009b].

The first paper in this issue, authored by Grzegorz J. Nalepa, proposes a semantic wiki platform, called PlWiki, for collaborative knowledge engineering. The wiki system can provide a strong knowledge representation capability for reasoning with Horn clauses-based representation. The main idea of this system is to use Prolog clauses on the lower level to represent facts and relations, as well as define rules on top of them.

As another important issue in semantic wiki systems, the second paper authored by Dosam Hwang et al. introduces a consensus selection method for reconciling conflicted knowledge. The knowledge dynamics patterns have been classified within semantic wikis.

In the third paper, Monika Lanzenberger et al. presents a novel ontology alignment visualization system. Ontology has been regarded as an important knowledge resources for collective intelligence. Thus, the paper claims that an efficient visualization tool is needed to improve the understandability of human users.

This special issue has been achieved by a number of fruitful collaborations. We would like to thank the editor in chief of Journal of Universal Computer Science (J.UCS), Hermann Maurer, for his kind support and help during the entire process of publication. The special issue has selected 3 high-quality papers out of 19 submissions (about 15.8% acceptance rate). This was possible thanks to the work of the renowned researchers that provided their anonymous reviews.

Finally, we are most grateful to the authors for their valuable contributions and for their willingness and efforts to improve their papers in accordance with the reviewers suggestions and comments.

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(Gyeongsan, Korea, March, 2010)

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