Computing and Informatics, Vol. 33, 2014, 477–478

EDITORIAL: COMPUTATIONAL INTELLIGENCE FOR BUSINESS COLLABORATION

Jason J. Jung

Department of Computer Engineering
Chung-Ang University
Seoul, Korea 156-756
e-mail: j2jung@gmail.com, j2jung@intelligent.pe.kr

1 WHY COMPUTATIONAL INTELLIGENCE?

Most of business in various sectors have been employing networked information systems. They have been considering that information sharing is the most important requirement for successfully fulfilling business goals. Since the businesses have been networked, a large amount of information has been available. Consequently, it has been difficult for them to find the best and optimized conditions and devisions. Thereby, there have been a lot of needs on intelligent methodologies for handling a large amount of the information retrieved from many different business areas [1].

Especially, computational intelligence for such efficient information processing is a key issue to collaboratively share knowledge and even generate new knowledge on business collaboration problems. Particularly, in this issue, we are regarding the computational intelligence as *a real-time (or ad-hoc) collaboration in networked information systems to build innovative knowledge with decentralized "partial" knowledge* [2]. For implementing this concept, we have to take into account a number of different issues, e.g., knowledge integration [3, 4] and conflict resolution [5].

2 OUTLINE OF THIS SPECIAL SECTION

Hence, the aim of this special section is to bring together researchers and practitioners in areas of knowledge and intelligence, semantics, and data mining systems to share their visions, research achievements and solutions to real business collaboration applications, to resolve the challenge issues and to establish worldwide cooperative research and development. This section is composed of 7 papers selected out of 12 submissions. Computational intelligence is applied into the BPM to bridge

the gap between the business world and information systems, especially in the context of business collaboration. This research trend includes emergent intelligent approaches from services into organizations, Semantic Web, ontology-based information systems, business integration, SOA, semantic web services discovery and composition, intelligent agents, cross-enterprise collaboration.

REFERENCES

[1] Clarke, R. J.—Nilsson, A. G.: Business Services as Communication Patterns: A Work Practice Approach for Analyzing Service Encounters. IBM Systems Journal, Vol. 47, 2008, No. 1, pp. 129–142.

[2] Lévy, P.: Collective Intelligence: Mankind's Emerging World in Cyberspace. Basic Books, 1994.

[3] Jung, J. J.: Semantic Business Process Integration Based on Ontology Alignment. Expert Systems with Applications, Vol. 36, 2009, No. 8, pp. 11013–11020.

[4] Jung, J. J.: Service Chain-Based Business Alliance Formation in Service-Oriented Architecture. Expert Systems with Applications, Vol. 38, 2011, No. 3, pp. 2206–2211.

[5] Nguyen, N. T.: Inconsistency of Knowledge and Collective Intelligence. Cybernetics and Systems. Vol. 39, 2008, No. 6, pp. 542–562.

Jason J. Jung is an Associate Professor in Chung-Ang University, Korea, since September 2014. Before joining Chung-Ang University, he was a faculty member in Yeungnam University from 2007. He was a postdoctoral researcher in INRIA Rhône-Alpes, France in 2006, and a visiting scientist in Fraunhofer Institute (FIRST) in Berlin, Germany in 2004. He received the B. Eng. in Computer Science and Mechanical Engineering from Inha University in 1999. He received M. Sc. and Ph. D. degrees in Computer and Information Engineering from Inha University in 2002 and 2005, respectively. His research topics are knowledge engineering on social networks by using machine learning, semantic Web mining, and ambient intelligence.