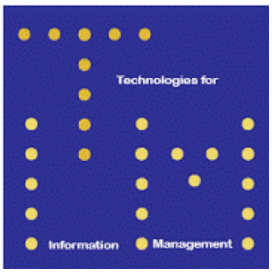

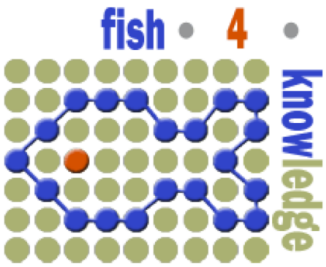

Fish4Knowledge Deliverable D6.2

International Scientific Workshop 1

Principal Author: UEDIN Jessica Chen-Burger
Contributors: NCHC Fang-Pang Lin
Dissemination: PU

Abstract: Summary report of invited conference session, which was organised and chaired by Jessica Chen-Burger as part of the International Conference KES AMSTA 2011.

Deliverable due: Month 24

As a part of F4K project commitments, we have held a special conference session entitled: Intelligent Workflow, Cloud Computing and Systems as a part of the main conference: International KES Symposium on Agents and Multi-agent Systems Technologies and Applications (KES AMSTA), Manchester, UK, June 29-July 1, 2011. In this document, we will refer to this special session as the Intelligent Workflow session in short.

This invited session is to fulfil our project commitments to hold a special interest scientific workshop in the area of intelligent workflow and high performance computing, e.g. Grid and Cloud computing, and also to generate community interests in these subject areas and to disseminate F4K project results, as appropriate. As a result, we were able to include one F4K research paper in this special session. All papers in this special session are published in Springer-Verlags Lecture Notes in AI, as a part of the LNCs/LNAI series.

KES AMSTA is an international scientific conference for research in the field of multi-agent and distributed systems that is highly relevant to our work in intelligent workflow and Grid and Cloud computing. In addition, the conference interests include knowledge representation and systems, semantics based techniques, ontologies, computational complexity that suits our Artificial Intelligence work. We therefore thought it is a very appropriate venue to hold our scientific workshop and to attract new interests and collaborative opportunities in our interest areas.

There are three chairs for this invited session:

- Chair: Dr. Yun-Heh Chen-Burger, University of Edinburgh, UK (F4K project, Edin. Univ. workflow team leader)
- Co-Chairs:
  - Dr. Fang-Pang Lin, National Center for High-Performance Computing, Taiwan (F4K project, Taiwan team leader)
  - Dr. Ching-Long Yeh, Tatung University, Taiwan

As we have decided to organise this special session within the project quite late, all of the papers are invited papers, although all papers have been through a proper peer review, critiquing and refinement process. We have been lucky to be able to get very high quality papers. Among them, we also have one invited talk, without paper publication. Enclosed below is the list of paper presentations and talk:

- Dynamic Workflow Adaptation over Adaptive Infrastructures, by Rafael Tolosana-Calasanz, Jose A Banares, and Omer Rana, from Universidad de Zaragoza, Spain and University of Cardiff, UK. This papers reports on a novel workflow framework and associated time-efficient techniques to process dynamic fast streaming data.
- ebXML Business-to-Business Integration Based on Semantic Cloud Computing Architecture, by Ching-Long Yeh, Tatung University, Taiwan. Professor Yeh has more than 15 years of academic and industrial experiences in e-Business and semantics based processes and workflow. This paper reports combined technologies of Semantic Web and cloud computing in a multi-agent architecture for managing business collaborations in ebXML.

- Automated System Configuration for Cloud Computing (invited talk only), by Paul Anderson, University of Edinburgh. Mr. Anderson has been the chief computing officer for the University of Edinburgh for more than 15 years. He is specialised in automatically generate dynamic (re-)configuration for very large systems. He has solid research and industrial experiences, having previously held scientific workshop and commercial consultancy projects. The dynamic configuration system that has been designed by him is in production use in Informatics, University of Edinburgh. In this talk, he presented his new research interests in utilising planning and semantics-based technologies for dynamic configuration for cloud computing that is funded by HP. He also gave an overview of his other current research work.

- SWAV: Semantics-based Workflows for Analysing Videos, by Gayathri Nadarajan, Yun-Heh Chen-Burger, Robert B. Fisher, University of Edinburgh. This paper reports on an extended work of Dr. Nadarajans PhD thesis that has won two continuous years of Google awards, 08/09 and 09/10. This paper describes an intelligent workflow system that uses knowledge and planning technologies to generate a virtual workflow machine (VWM). This VWM is generated automatically and on demand that carries out video and image processing on videos that have been captured in an uncontrolled environment, i.e. open sea.

- A Meta-Model of Business Interaction for Assisting Intelligent Workflow Systems, Areti Manataki and Yun-Heh Chen-Burger, University of Edinburgh. This paper presents an ontological approach for modelling and automating business collaborations and interactions based on a business theory, Business Action Theory (BAT). Based on a formalisation of BAT, the developed meta-model can support the automation of business collaborations and interactions, as well as assist its automated analysis. This paper paves a way to bridge the gaps between the normally only human-understandable informal business theories and machine-understandable automated systems.

Overall, there were about 20 people in the audience and the general response was very positive and triggered lots of follow-up discussions. Audience of this special session was also somehow combined with another special session, Digital Economy, as it shares the same conference room that is a good mix of audience.

The Intelligent Workflow special session has generated some very healthy interests and we have been invited to create and run a special edition for the International Journal of Knowledge Based and Intelligent Engineering Systems (www.kesinternational.org/journal/). This part of the work has not been done yet, but a call for paper for this special edition is in preparation.

In additional, the conference chair of KES-AMSTA 2011 (Dr. Jim Oshea, Manchester Met Univ.) has become interested in our work and achievements and is scheduled to visit Edinburgh University and give Informatics a talk on Nov 24th, 2011. We are also invited back and planning for an exchange visit with them later on, as appropriate.

Due to the great interest in our special session and the positive feedback, we have now been invited back to hold another special session as a part of the conference, i.e. KES AMSTA 2012, next year.

