

## Preface

It is our pleasure to bring you the proceedings of the second edition of the Workshop on Context, Information and Ontologies (CIAO 2010), held in conjunction with the International Conference on Knowledge Engineering and Knowledge Management (EKAW) at Lisbon, Portugal. The previous edition of the workshop was co-located with the 6<sup>th</sup> European Semantic Web Conference in 2009.

CIAO 2010 is concerned with the relationship between context, information and ontologies. Understanding context is crucial to delivering the right information, in the right format, at the right time, and in turn to enhancing the productivity of knowledge work. Meanwhile, ontologies can be used to describe context; whilst in some cases context may influence the interpretation of a particular ontology. As well as the typical context-aware applications in ubiquitous and ambient intelligent systems, the notion of context has special relevance in relation to the interaction of context and user activity, and in particular, the influence and role of context in knowledge processes. Thus, a context-aware environment may analyze and detect the user's current work through observations, understand and learn what he does, relate user actions to available resources, and support the user with suggestions.

The workshop considers all the research challenges related to representing, managing, using and learning contextual information, bringing together researchers interested in the use of context for information delivery and the role of context in knowledge processes. The use of context is also seen as of great practical importance. Therefore, particular encouragement has been given to papers relating to practical implementations in order to make the event of interest both to researchers in industry and academia.

CIAO 2010 solicited three categories of papers: regular research submissions; position papers presenting research at an early stage; and demonstration papers. Overall seven high quality contributions were selected by the Programme Committee – five regular papers, one demonstration paper and one position paper.

The keynote by Prof. Enrico Motta opens the program of the workshop with a special emphasis on the dynamic contextual nature of knowledge when dealing with thousands of ontologies in Semantic Web applications.

The selected regular papers cover the issues of:

- Mining contextual knowledge and actions from recorded traces of knowledge processes such as logs
- Developing context models in the form of ontologies at the upper and domain levels of abstraction for further use in context-aware tools for knowledge workers
- Using contexts in software tools that enable organizing and sharing knowledge among knowledge workers
- Developing context ontology networks for representing contextualized information in mobile environments and adapting applications based on user context
- Enriching the knowledge modeling paradigm by introducing context as a new dimension in ontology engineering, enabling representation and reasoning with contextual information associated to knowledge

The demonstration paper presents the use of ontological contexts – the structural partitions in an ontology – that enables better performance in analyzing structural differences between ontology schemas using an Ontology Difference Visualizer software tool.

The position paper presents an ongoing research activity aiming at using mobile context-based reasoning for creating personalized message filtering.

The workshop would not have been possible without the support of many people. First of all we would like to thank the members of our Programme Committee for providing timely and thorough reviews, and also for being cooperative in doing additional review work. We are also very grateful to all the authors who submitted papers to CIAO and thus demonstrated their interest in the research problems within our scope. We would like also to thank the organizers of EKAW 2010.

We hope that you will enjoy the CIAO 2010 technical program.

Vadim Ermolayev  
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