# Fourth International Workshop on Modeling and Reasoning in Context (MRC 2007)

Including special track on

Role of Contextualization in Human Tasks: Enriching Actors

(CHUT-07)

## Summary

August 20th – 21st

The MRC workshop series aims to provide a forum for scientists and practitioners exploring modelling and reasoning issues and approaches for context sensitive systems, from a broad range of areas, to share their problems and techniques across different research and application areas.

The CHUT special sessions focuses on the process of contextualization in human task, including the actor accomplishing the task and the working place where this occurs.

# Monday

**MRC Paper Session 1**

- Linking Context Modelling and Contextual Reasoning. *Dongpyo Hong, Hedda Schmidtke, and Woontack Woo*
- Using Situation Lattices to Model and Reason about Context. *Juan Ye, Lorcan Coyle, Simon Dobson, and Paddy Nixon*

**CHUT Paper Session**

- Improving drivers' situation awareness. *Juliette Brézillon, Patrick Brézillon, and Charles Tijus*
- Reverse-engineering of individual and inter-personal work practices: A context-based approach. *Marielba Zacarias, H. Sofia Pinto, and José Trobolet*
- Modeling context in software reuse. *Eduardo Cruz, Vaninha Vieira, Eduardo S. de Almeida, Silvio R. L. Meira, Ana Carolina Salgado, and Patrick Brézillon*

**Panel discussion:** Key issues for modelling context

**Panel discussion:** Key issues for reasoning in context

**Workshop Dinner**

**MRC Paper Session 2**

- Towards Scatterbox: a Context-Aware Message Forwarding Platform. *Stephen Knox, Adrian Clear, and Ross Shannon*
- Learning at your Leisure: Modelling Mobile Collaborative Learners. *Anders Kofod-Petersen and Sobah Abbas Petersen*
- Towards a Generic Contextual Elements Model to Support Context Management. *Vaninha Vieira, Patrick Brézillon, Ana Carolina Salgado, and Patrícia Tedesco*

**Summary and open discussion**

**MRC meeting**

# Key issues for modelling context

- Eliciting and modelling social aspects
- Need for incremental knowledge acquisition
- Adressing ambiguities, uncertainty, fuzziness
- Distinction between context and situations
- Roles of and distinction between goal, focus, and motivation
- Context modelling or modelling context?
- Context is related to actors and relation between actors
- Need for exploring the dynamical aspects of context
- Interdisciplinary approach

# Key issues for reasoning in context

- Relation between domain-dependent and domain-independent rules
- Knowledge allowing us to asses a situation *vs.* knowledge allowing us to adopt to a situation
- Suitable reasoning mechanisms: grounded in human reasoning and model-based reasoning
- Ambient intelligent systems substitute/extend traditional interfaces with behavioural and multi-modal ones
- Explanations as part of the reasoning process and as a means to communicate with the user
- Linking qualitative and quantitative representations
- Dealing with uncertainty and inaccuracy of sensors
- Reasoning in context is (1) partial, (2) approximative, and (3) perspectival

# Open Discussion

- Perception – Awareness – Sensitivity
- Specification – Context management – Adaptation
- Context as an emergent and dialectic phenomenon
- Situation – focus – context

---

- Need for a common terminology?
- Functional consensus reached, not structural
- Learn from older discussions of context
- How to define relevance?
- Understanding behaviour *vs.* building systems
- Context additional information/knowledge *vs.* context restricting information/knowledge
- Enhancing/enabling user *vs.* communication partner

## Looking Forward

MRC – Modelling and Reasoning [of|in] Context

We are working towards the production of a manifesto, exploring shared functional similarities and making explicit the differences.

A special issue of Revue d'Intelligence Artificielle

MRC 2008 – coming to a conference near you!