

IEEE FIPA Workshop on Design Process Documentation and Fragmentation

to be held at The Multi-Agent Logics, Languages, and Organisations Federated Workshops (MALLOW 2010)

30th of August - 2nd of September, 2010

Domaine Valpré - Lyon, France

(Website at <http://mallow2010.emse.fr/index.html>)

Complex software system development with the agent-oriented approach requires suitable agent oriented modelling techniques and processes providing explicit support for the key abstractions of the agent paradigm. Several design processes supporting analysis, design and implementation of Multi-Agent Systems (MAS) have been to date proposed in the context of Agent Oriented Software Engineering (AOSE). Each of them presents different advantages when applied to specific problems. A unique design process can not be general enough to be useful to everyone without some kind of customisation; when developing a new design process, several MAS developers/designers prefer to use phases, models or elements coming from existing design processes in order to build up a personalised approach for their own problem thus spending time and increasing the cost for learning different approaches.

This problem can be faced by adopting the method engineering paradigm (more precisely the situational method engineering paradigm). Situational method engineering paradigm provides means for constructing ad-hoc software engineering processes following an approach based on the reuse of portions of existing design processes, the so called *method fragments* stored in a repository, called *method base*.

Method fragment or simply fragment is the building block of ad-hoc design processes; several well known approaches in literature present different definitions and descriptions of method fragment but all of them share the same assumption: each existing design process can be considered as composed of self contained components, the fragments. The definition of method fragment in every kind of situational method engineering approach constitutes the base for the extraction of fragments from existing design processes, for their retrieval from the method base and for their assembly in the new design process. Today it does not exist (yet) a unique, standard, definition of method fragment besides when looking at existing design processes, usually designers have to cope with an additional difficulty consisting in the lack of uniformity in their documentation. Other, still open issues, lies in the definition of techniques for fragment selection and composition.

The IEEE FIPA Design Process Documentation and Fragmentation working group is working on such topics in order to provide a solution to the raised issues in terms of a shared and easily adoptable specification for the documentation of the design process and of the process fragment.

More in details, this working group aims to propose a definition of method fragment to be used during a situational method engineering process, the fundamental elements it is composed of and the metamodel it is based on.

The first, currently undergoing, step is the identification of the most suitable process metamodel and notation: (i) for the representation of the existing design processes from which the fragments have to be extracted, and (ii) for the representation of fragments themselves.

This step will outcome in the definition of a proper template for the description of agent-oriented design processes. Such a template will, obviously, refer to the selected process metamodel and suggest the adoption of good practices in documenting existing processes as well as defining new ones. A refined draft of the template is already available from the working group website at: <http://www.pa.icar.cnr.it/cossentino/fipa-dpdf-wg/>

The final step will be the definition of the Method Fragment Structure and Documentation Template. This work will start from the results obtained by the old FIPA Methodology Technical Committee (years 2003-2005).

Aim of this workshop

This workshop will focus on the research and standardisation topics related to the activity of the IEEE FIPA DPDF working group. They will include process modelling, process documentation, theoretical and practical aspects of design process definition, the different use of fragments, and the definition of concepts and techniques related to them. Although the workshop is tightly related to the FIPA context,

the scope is not limited to agent-oriented approaches but other points of view are of great interest to this event.

The workshop organisers specifically welcome papers describing applications of the specification drafted by this FIPA working group or new specification proposals for process documentation, fragment definition, and process fragmentation.

A non-restrictive list of topics of interest includes:

- Specification proposals and applications of the specifications already drafted by the working group
- Situational Method Engineering (SME)
- Agent Oriented Software Engineering (AOSE)
- Standards for the description of design processes and process/method fragments
- Models, Metamodels and Notations for design processes/fragments
- Techniques for process fragmentation
- Techniques for fragments selection
- Techniques for fragments composition
- Best practices for defining/documenting fragments and processes
- Theories and practical experiences in the field

Important dates

Important Dates:

- June 13, 2010: Submission of Papers
- July 08, 2010: Notification of Acceptance/ Rejection
- July 30, 2010: Submission of Camera-Ready Copies
- 30 Aug – 02 Sept, 2010: Workshop

Organisers

- Massimo Cossentino (Consiglio Nazionale delle Ricerche, Italy)
- Vincent Hilaré (Université de Technologie de Belfort-Montbéliard, France)
- Ambra Molesini (Alma Mater Studiorum – Università di Bologna)

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