

Title of the Proposed TFG

Agent-Oriented Software Engineering

Scope and Aims of the TFG Activity

The scope of this TFG is to work on agent-oriented software engineering (AOSE) main challenges. These include all the topics presented in the AgentLink II Roadmap and some others proposed by TFG supporters.

In the first meeting (in Rome), the TFG activity was divided in two different sessions: the first session dealt with methodologies and MAS (multi-agent system) meta-models. In the second session, we discussed about methodologies evaluation, ideas for future activity of this TFG and future trends in AOSE. A large number of people attended the two different sessions and a total number of 17 talks have been presented.

In the second meeting the same (and in the meanwhile enlarged) group of supporters proposes to continue the already initiated activity mainly in two directions:

1. MAS meta-model: discussion of one or more unification proposals.
2. Methodologies evaluation: first step of the work for the identification of
 - a. a framework for methodologies evaluation
 - b. a set of case studies

Success stories in the field will be considered as well in order to motivate agent-oriented software engineers to adopt and apply evaluation approaches in their work.

Aims

During the activity of this forum the proposed aims are:

- Refining the contributions about MAS meta-models that some supporters are already preparing. This activity will lead to the identification (and formalization) of one or a few meta-models that will meet a sufficient consensus to be adopted as a common reference point by the European research community in this area.
- Starting a discussion on methodologies evaluation approaches, benchmarks, metrics, case studies and verifying the possibility of starting a collaborative work for the identification of a largely agreed framework (to be completed in the next TFG).

TFG Category

Research area.

TFG Chair

Massimo Cossentino, ICAR-CNR (Italian National Research Council),
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TFG Program Committee

- Carole Bernon, Institut de Recherche en Informatique de Toulouse, University Paul Sabatier, Toulouse, France, bernon@irit.fr – <http://www.irit.fr/SMAC>.
- Juan Pavón, Universidad Complutense Madrid, jpavon@sip.ucm.es, <http://grasia.fdi.ucm.es>.
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- Franco Zambonelli, University of Modena and Reggio Emilia, franco.zambonelli@unimore.it, <http://www.dismi.unimo.it/Zambonelli/>.

TFG Promoters

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Related Activity, Connections & Perspectives of TFG Chair & Promoters

M. Cossentino, the chair of this proposed TFG chaired the AOSE TFG at AL3-TF1; he is a researcher of the Italian National Research Council and he is currently researching on flexible approaches for the composition of agent-oriented design methodologies; he is author of several papers in the field. This research activity is coordinated with the FIPA Methodology Technical Committee that he is chairing.

Many of the other promoters are members of the same FIPA TC and actively participate in advancing the state of the art of EU nations on related topics. It is worth to remark that several companies operating in the field of (agent-based) software development had demonstrated a concrete interest in this plan, some are among the promoters while some others will look at its results while the participation to this TFG remains out of their scope.

Assessment of Potential Interest

- Researchers, practitioners and developers of multi-agent systems
- Users of the proposed standardization models.
- FIPA Members (specifically of the TC Methodology).

- Institutions teams that work with agent-oriented systems
- Software engineering people.

"Outline plan" of TFG activities

Before:

- Ask potentially interested people to prepare some proposals of MAS meta-models (activity ongoing).
- The chair of the TFG will ask people who want to present their meta-model during the meeting to send a "paper" about them. These papers will be published in the TFG website before the meeting so that all participants can have access to all the documents.
- Supporters who want to contribute to the methodologies evaluation activity should send written contributions before the meeting to allow their publication on the website
- "Simple" participation (from everyone that has not sent a contribution) to the meeting is encouraged as well.

During:

- Presentation of the different MAS meta-models and discussion about their unification.
- Discussion on possible approaches for methodologies evaluation
- Discussion on further activities of this TFG, large scope scenarios will also be evaluated

After:

- A report of the meeting concerning the different MAS meta-models and the results of the discussion about methodologies evaluation will be produced.

Intended Format of the TFG Meeting at AL3-TF2

Duration:

1 day (8 hours).

Activities:

MORNING (4 hours)

First part – General Presentations

- Presentation of the objectives and of the agenda (5 minutes)
- Participants presentation (3 minutes per participant)

Second part – MAS Meta-models (3 hours)

- Presentations of the different MAS meta-models prepared by participants and published on the website (10 minutes per each)
- Discussion to build one (or more) unified meta-models.

AFTERNOON (4 hours)

First Part – MAS Meta-Models (2 hours)

Second part of discussion

Second Part - Methodologies evaluation (1 hour)

- Presentation of success stories of methodologies evaluation approaches.
- Work to identify one or several representative case studies, benchmarks, significant parameters, quality indexes of design methodologies.

- Outline of a document describing the evaluation framework (the document itself will be completed off-line after the meeting).

Third part – Other topics and Conclusions (1 hour)

- Talks on other topics (if proposed)
- Summary by organizers of the work
- Short concluding statements by all participants pointing out their opinions on the meeting. Do they want to continue to work on these topics? Have they ideas for a next meeting?

Procedures to Produce the Deliverables after AL3-TF2

The final result of the AL3-TF2 meeting will be a report composed as described below. It will be written off-line soon after the meeting and reviewed with the contribution of all the participants.

The outline of the document will be:

- 1) MAS Meta-models
 - a) One subsection for each presented meta-model
 - b) The outcome of the meeting about an unifying MAS meta-model
- 2) Methodologies Benchmarking
 - a) Presented success stories
 - b) Identified methods, parameters and other relevant issues
 - c) Result of the discussion
- 3) Suggestions for Further Meetings

While we aim at completing section 1 and 3 of this report during this meeting, we also think it is unrealistic to write in one unique meeting also a document on methodologies evaluation. For this reason, we now limit our scope to identify the key topics that will be part of it, drafting its outline and then we plan to write the document offline after the meeting. The resulting work could be discussed and validated during AL3-TF3 if this TFG will be active in that event.