

****Auteurs de la proposition* :***

Cedric Dumoulin –Jean-Luc Dekeyser

****Titre de la proposition :***

Automatisation de l'enchaînement des tâches exécutés sur des modèles.

*****Projet ou équipe :*** ****

projet DaRT

Title

Automation of the chaining of tasks executed on models

Research Context

The DaRT project-team main research topic is the co-design of embedded systems by a Model Driven Engineering (MDE) approach. We propose an integrated development environment, called Gaspard 2, allowing the design of embedded systems using models at a high level of abstraction. From these models, it is possible to automatically generate various code and models that can be used for example for simulation. Going from the models at a high level of abstraction to the code is done through a chain of model transformations using intermediate models.

In the actual Gaspard tool, the “transformation chain” definition is complex. Furthermore, tools like simulators or refactoring are applied manually on generated models. We would like to make uniform the different processes (transformation, test, simulation, refactoring) applied on models. For that, we say that each process is a task applied on input models and eventually producing output models. A task can depend on other tasks, or on the presence of input models to be executed. Thus, we have a graph of task dependencies.

We want to be able to define easily such execution graph with an appropriate model, and then execute a task. Execution of a task can be conditioned by different factors: The comparison of the date of the different input and output models; The dependencies ...

Activity Description

The candidate will propose a metamodel allowing to model such tasks, their dependencies, their input and output models ... The candidate will also implement the engine allowing the execution of the tasks.

References

- www.lifl.fr/west

- <http://www.inria.fr/recherche/equipes/dart.en.html>

Required Skills

Following skills, or an interest in the domain, are required:

Models; metamodels; model transformations; Eclipse, EMF and Java

Contact Persons

Jean-Luc Dekeyser jean-luc.dekeyser@inria.fr

Cedric Dumoulin cedric.dumoulin@inria.fr