

The Open Model CourseWare Component: A Proposal for a New Eclipse/GMT Component



By Jean Bezivin, Hugo Bruneliere – INRIA (ATLAS Group)

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Historical background

The importance of providing open courseware on new and innovative aspects of the Eclipse systems has been recognized since the beginning. The place to locate the corresponding material and to organize it has not been easy to define. One approach (complete centralization) suggested that all courseware should be located at the same place, so that it should be easy to find. This was the solution originally proposed by the ECESIS project. Another completely opposed approach (complete repartition) suggested locating the material as close as possible of the source or use of the information. A presentation on a given technology would then be placed in the terminal project or component to which it is most related. A tutorial should be placed in the space reserved for this conference.

Experience has shown that there is no ideal and stable solution. In the initial phases of the Eclipse project, the new concepts (plug-ins, etc.) were not too numerous and the ECESIS project hosted very successfully the set of teaching artifacts. Time going on, this solution was not found to be convenient and the ECESIS project was archived. The idea is to bring the teaching and learning material close to the technology but not to scatter it completely. In our case we recognize that the new top-level Eclipse Modeling Project (EMP) has created a need to explain a lot of new concepts, quite different from classical programming concepts (MDA, UML, CWM, SPEM, MOF, OCL, EMF, QVT, etc.). As a consequence the best way for the time being seems to create a new courseware component in the GMT project. Since GMT is the research incubator project of EMP, this seems a normal place to harbor the new component.

The objective

Open Model CourseWare aims to provide a set of teaching and learning artifacts to the modeling community. Model-Driven Engineering (MDE) is still in its infancy and the approach has yet to be made popular. This is not like the introduction of a new programming language. The method is quite different since models are different from simple executable programs. The MDE approach suggests using transformational and generative techniques to produce running systems from very abstract models.

Following the model courseware that was initially contributed to the ECESIS project, we will accept any format if it allows easy modification. The rule is to cope with the formats used by the contributors to which the users will adapt. We ask in any contribution the authors to mention that the material is provided according to the Eclipse Public License (EPL 1.0). This mention could be put in one initial page/slide or on all pages/slides.

Model Driven Engineering is still quite young and will probably much evolve in the coming years. This is why it is interesting to provide several levels of access to the corresponding courseware. To some, UML, UML-profiles, OCL and simple Model-to-text transformation techniques will be largely sufficient. Some others will need more advanced MOF, and Model-to-text technology basis to achieve their goals. The teaching material intended to be made available in Open Model CourseWare will address several different maturity levels and several needs for understanding the advantages, characteristics, and applicability conditions of MDE.

The community

The objective is not only to create a library of teaching and learning artifacts in the domain of model driven engineering, but to set up a community of producers and users of such artifacts that will exchange through newsgroups and other means.

The planning

We do not start from scratch. Within the ECESIS project, there was already some significant set of courseware that was already contributed. We are first going to reinstall these contributions in the new Open Model CourseWare project. From there the community will decide what the most important missing parts are and will help filling the holes. The hope is that, as soon as possible, any university teacher or industry consultant will be able to find in Open Model CourseWare the slides, the texts, the exercise or the project description he/she needs to set up a course or an industrial seminar on these topics. Needless to say that the users of these courses and teaching material will become at some time contributors and will participate themselves to enrich the courseware library and to animate the community.

It is thus anticipated that the community of model engineering teaching will animate the Open Model CourseWare and extend it much beyond its initial state. There is a definitive need in this area because many universities are currently setting up model engineering courses and because the industry is asking for open source material that could help educate the engineers and help the migration from code-based to model-based practices.

Organization

We propose that the Open Model CourseWare component be undertaken as part of Eclipse Modeling Project (EMP)/Generative Modeling Technologies (GMT).

The initial committers are Jean Bezivin and Hugo Bruneliere from INRIA (ATLAS Group).

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