The GEMOC Initiative

On the Globalization of Modeling Languages

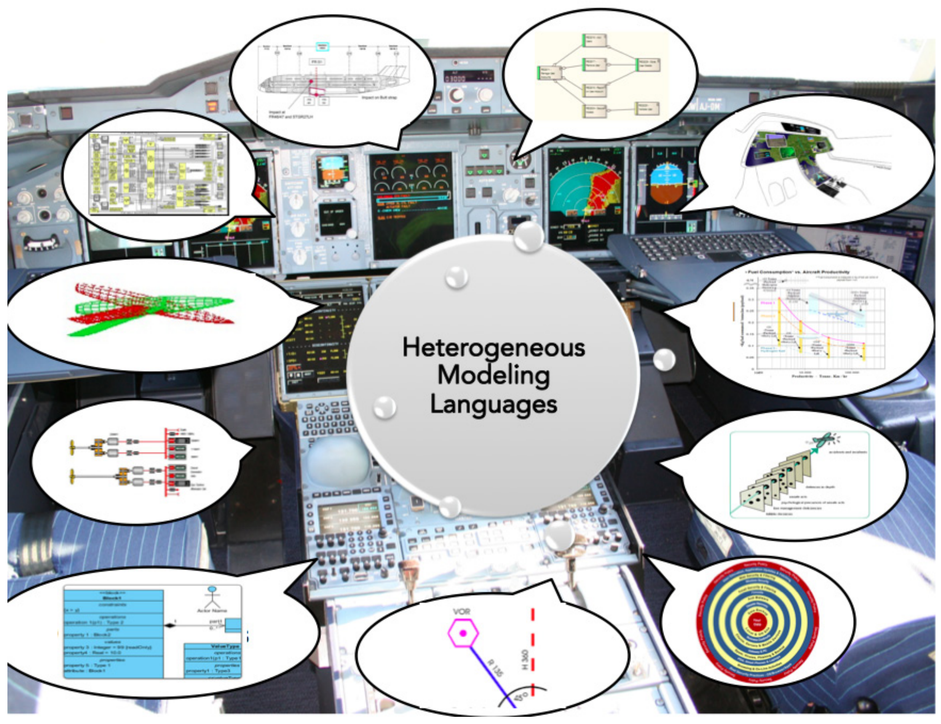
The New Grand Challenge of the Globalization of Modeling Languages

"Supporting Model Heterogeneity in the Development and Runtime Management of Complex Software-Intensive Systems"

Complex Software-Intensive Systems (e.g., Cyber-Physical Systems, Internet of Things):
- deal with multiple concerns and stakeholders,
- integrate heterogeneous parts and environments,
- manage evolution and emergence of new concerns,

But… require **global** analysis, execution and adaptation.

Model Driven *Software* and *System* Engineering
=> Separation of concerns by using multiple (domain-specific) modeling languages
=> Software Language Engineering (language design, implementation, **and globalization!**)



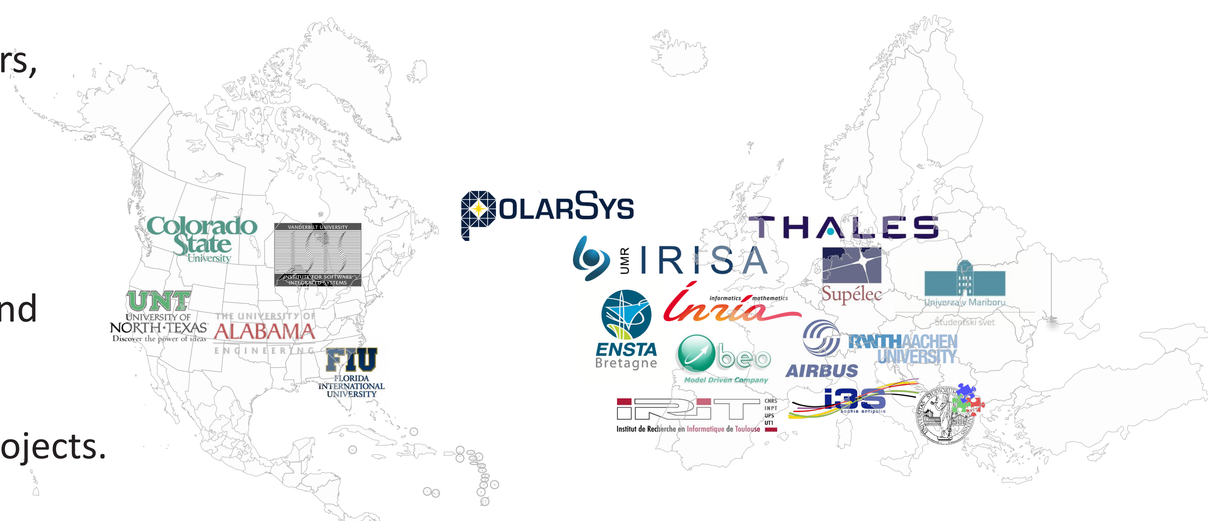
"On the use of multiple modeling languages to support the coordinated development and runtime management of heterogeneous aspects of Complex Software-Intensive Systems."

The GEMOC Initiative: http://gemoc.org

"GEMOC is an open and international initiative that aims to develop the necessary breakthrough in software language engineering (SLE) to support a global software engineering through the use of multiple domain-specific modeling languages. GEMOC partners investigates effective tools and methods in SLE for the design and implementation of collaborative, interoperable and composable modeling languages."

The GEMOC initiative provides:
- a framework that facilitates collaborative work between members,
- a dissemination of the research results and other related information on GEMOC activities.

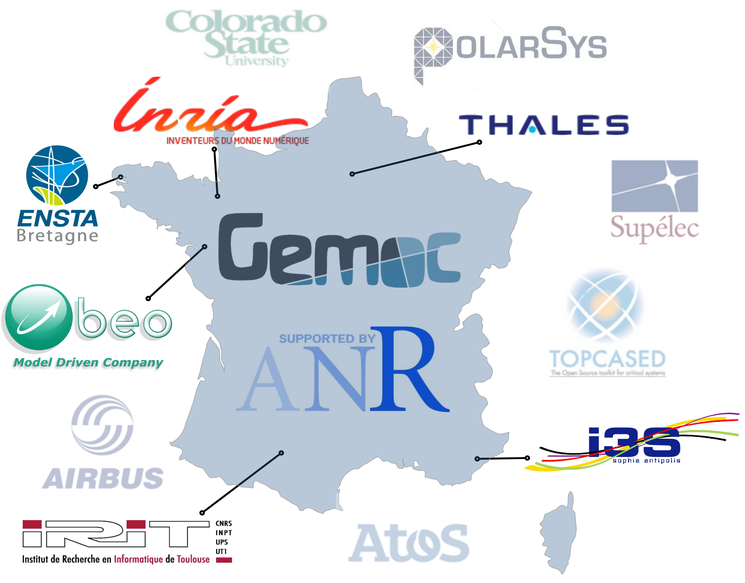
Member Directory: http://gemoc.org/members
Advisory Board: Benoit Combemale, Robert B. France, Jeff Gray, and Jean-Marc Jézéquel



The GEMOC Initiative is funded by complementary and successive projects.
IP issues are left to the PCA of each project.

The ANR Project GEMOC: http://gemoc.org/ins

"A Language Workbench for Heterogeneous Modeling and Simulation of Complex Software-Intensive Systems"

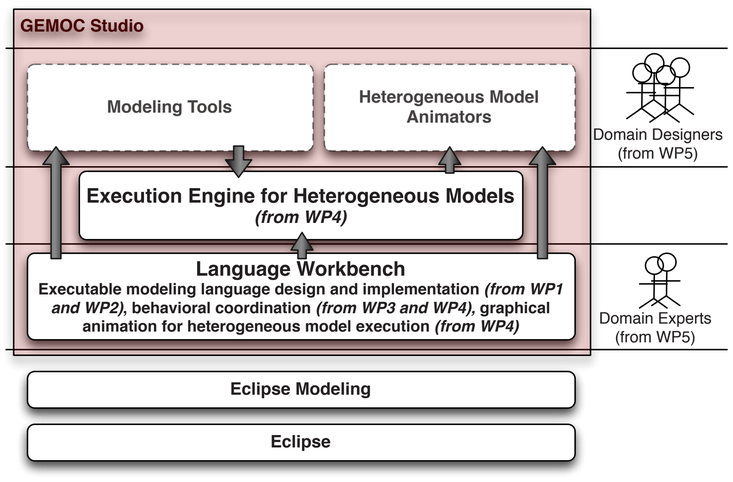


ANR Project #ANR-12-INSE-0011, Program INS
Date: 01.12.12 - 30.03.16
Competitiveness clusters: Image & Réseaux, Aerospace Valley and Systematic

Objective: coordination of multiple executable modeling languages to support the coordinated execution of heterogeneous behavioral models

Approach: bridging the chasm between models of computation and executable metamodeling

Expected outcome: scientific and technological foundations on modeling language design, implementation and coordination, integrated into the GEMOC studio, a language workbench to support concurrent execution of heterogeneous models and graphical animation



September, 2013.