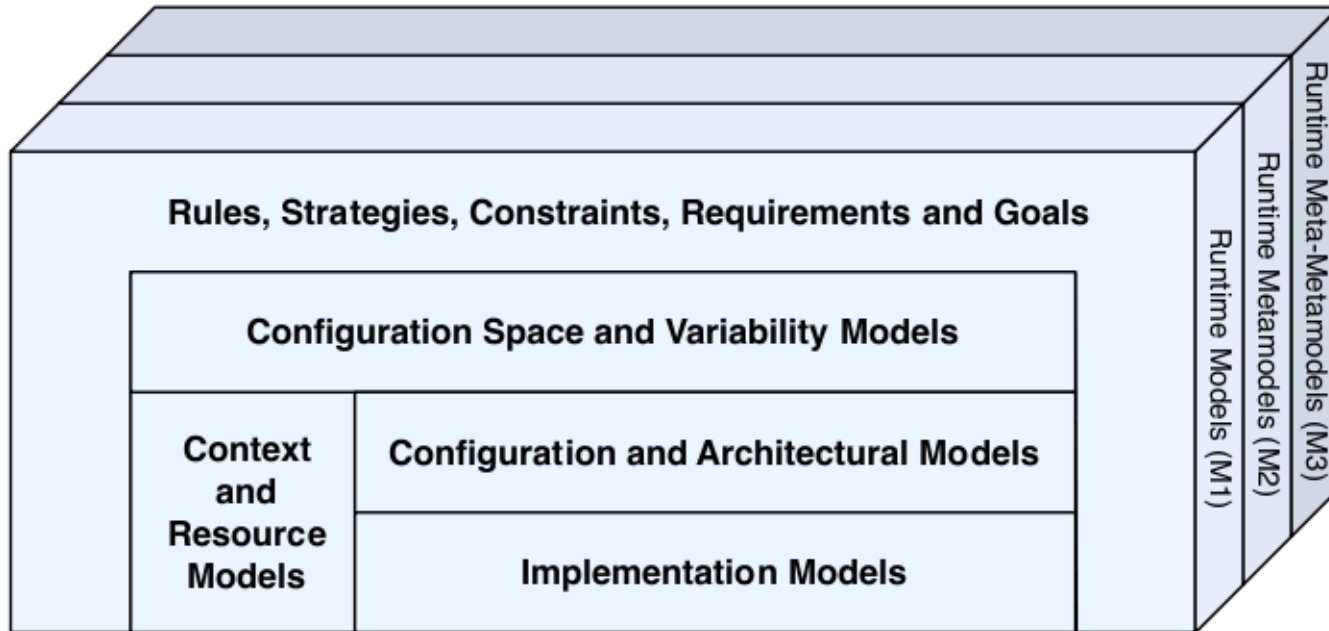


Classification and Applications of Models@Run.time

Models@Run.time Workshop 2010

Starting point...



Purposes of Models@Run.time

- Reasoning (Analysis)
 - Defect Detection
 - Also Detect Defects in the Runtime Adaptation
 - Model Checking
- Decision
 - Changes to Running Systems
 - Runtime Adaptation
 - Reports, etc.

Classification of Models@Run.time

Type of Model	Purpose	
	Type of Reasoning	Type of Decision
Context Model, Architectural System Model , Decision Model, Variability Model	Reasoning on context, environment, and current state of the system	Adapt the system or not (Architectural Level Adaption)
Context Model, Behavioral System Model (Sequence Diagram), Variability Model	Reasoning on context, environment, and current state of the system	Adapt the system or not (Behavioral/Trace Level Adaption, e.g., Aspect-oriented)
Context Model, Architectural Model, Decision Model, Variability Model	Defect Detection on the Decision Model	Identify possible invalid system states
PSM	Reasoning on applicability of reconfiguration at the platform specific level	Perform, delay or abort reconfiguration
Code	Reasoning on defects in code	Fix defects in code
...

Dimensions and Levels of Abstraction of Models at Runtime

