Modelio

Nut Bandera González
Miguel Cuesta Martínez
María Flórez Miranda
Alejandro Matas Sánchez
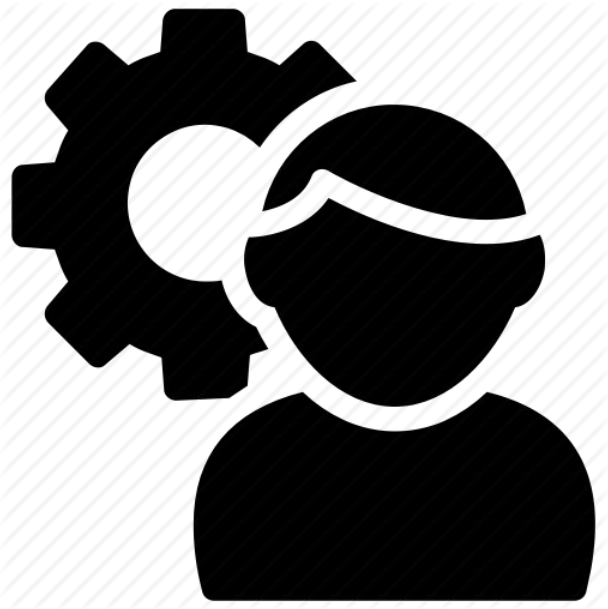
What is Modelio?

- Modeling environment

- Emphasis on consistency checking

- BPMN + UML support

- Java code generation and reverse

Stakeholders: Users

- Code developers

- Business Architects

- Software Architects

Stakeholders: Contributors

- Analysts

- Open Source Supporters

- Class Relation Specialists:
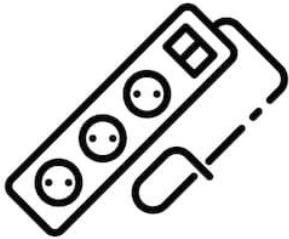   - Philippe Desfray

Quality Attributes

Interoperability	
Learnability	

Quality Attributes

Extensibility	
Reliability	

Constraints

The software is open source	
The software was developed in Java	

Constraints

Modelio participates in the OMG's Model Interchange Working Group	
UML Standards are often flawed.	

Development Aspects

- Developed mainly in **Java** (and C++)
- Core architecture supports extension -> MODULES (developed in Java)
  - Modelio API in development + debugging
- Report + fix bugs

Modelio 4.0 API

Packages

Package	Description
org.modelio.api.astyle	
org.modelio.api.modelio	
org.modelio.api.modelio.audit	
org.modelio.api.modelio.diagram	
org.modelio.api.modelio.diagram.autodiagram	
org.modelio.api.modelio.diagram.dg	
org.modelio.api.modelio.diagram.style	
org.modelio.api.modelio.diagram.tools	
org.modelio.api.modelio.diagram.tools.standard	
org.modelio.api.modelio.editor	
org.modelio.api.modelio.exchange	
org.modelio.api.modelio.mc	
org.modelio.api.modelio.meta	
org.modelio.api.modelio.model	
org.modelio.api.modelio.model.event	
org.modelio.api.modelio.model.scope	
org.modelio.api.modelio.module	
org.modelio.api.modelio.navigation	
org.modelio.api.modelio.pattern	
org.modelio.api.modelio.picking	
org.modelio.api.module	
org.modelio.api.module.command	
org.modelio.api.module.command.standard	
org.modelio.api.module.context	
org.modelio.api.module.context.configuration	
org.modelio.api.module.context.i18n	
org.modelio.api.module.context.log	
org.modelio.api.module.context.project	
org.modelio.api.module.contributor	
org.modelio.api.module.contributor.diagramcreation	
org.modelio.api.module.contributor.diagramcreation.standard	

org.modelio.api.module.license
org.modelio.api.module.lifecycle
org.modelio.api.module.mda
org.modelio.api.module.parameter
org.modelio.api.module.parameter.impl
org.modelio.api.module.propertiesPage
org.modelio.api.module.script
org.modelio.api.plugin
org.modelio.api.ui
org.modelio.api.ui.contributor
org.modelio.api.ui.dnd
org.modelio.api.ui.form
org.modelio.api.ui.form.fields
org.modelio.api.ui.form.models
org.modelio.api.ui.labelprovider
org.modelio.api.ui.swt
org.modelio.api.ui.swt.metaclassselect
org.modelio.api.ui.text
org.modelio.archimate.metamodel
org.modelio.archimate.metamodel.core
org.modelio.archimate.metamodel.core.generic
org.modelio.archimate.metamodel.core.generic.composite
org.modelio.archimate.metamodel.core.generic.motivation
org.modelio.archimate.metamodel.core.structure
org.modelio.archimate.metamodel.core.structure.folder
org.modelio.archimate.metamodel.layers.application.behavior
org.modelio.archimate.metamodel.layers.application.structure.active
org.modelio.archimate.metamodel.layers.application.structure.passive
org.modelio.archimate.metamodel.layers.business
org.modelio.archimate.metamodel.layers.business.behavior
org.modelio.archimate.metamodel.layers.business.composite
org.modelio.archimate.metamodel.layers.business.structure.active
org.modelio.archimate.metamodel.layers.business.structure.passive
org.modelio.archimate.metamodel.layers.implementation_and_migration
org.modelio.archimate.metamodel.layers.motivation
org.modelio.archimate.metamodel.layers.physical.structure.active

Modelio's core modules

Modules and Components

- GOAL: extend + add capabilities to Modelio
- Modelio offers

Model Components

- Pts. of large model into 1 file
- Sets of tools, models, libraries, etc.
- MDAKit, Draw2D, .NET Framework Class Library, RCP Eclipse...

MODULES

- Flexible extension mechanism
- **Java + XML** + resource files in project -> packaged
- Deployed + executed in Modelio
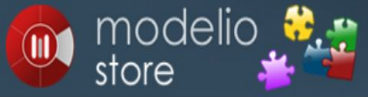- Wide range of existing modules + can create your own

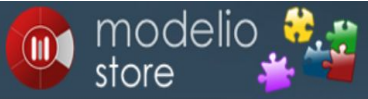## Scripts (Jython)

- Java implementation of Python
- To create Macros
  - ≈ modules
  - less powerful

Modules and Components: Modules

EXISTING MODULES	modelio store	Examples	Java Designer Excel Exchange Web Model Publisher ArchiMate Architect
DEVELOP YOUR OWN	Modelio Community Forge modelio store	Developed with…	eclipse MODELIOSOFT UML/BPMN Metamodel

RCP Architecture
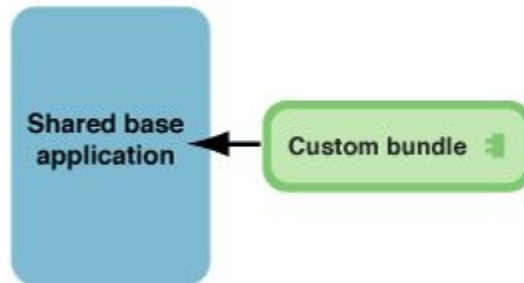
- Manage GUI

- Build applications on existing platforms

- Workbench

- Integrate software components

GEF: Graphical Editing Framework

- Support Modelio diagrams

- Provides tools and framework components

- Different components: editor, tool palette, figures, …

- Several patterns: MVC, Factory, Observer, …

MDA Architecture

- Separates functionality from implementation

- Viewports: CIV, PIV, PSV

- Models: CIM, PIM, PSM

Questions