



The Certifier and the Object Editor

Fondue Toolset status
28 May, 2004 - Besançon
Frédéric Fondement

Contents

- Architecture of the Fondue Toolset
- The Certifier
- The Object Editor
- Conclusion

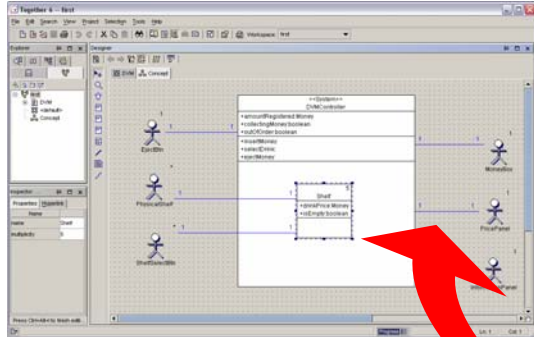
Some pieces of demo inside !

Contents

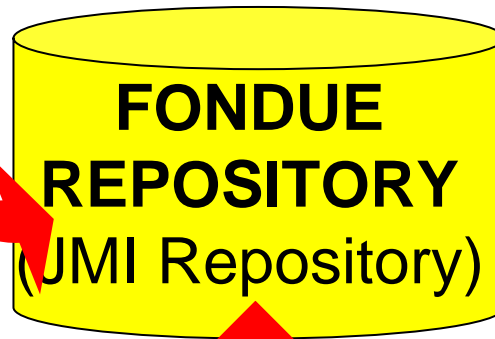
- Architecture of the Fondue Toolset
 - Overview
 - Reality
- The Certifier
- The Object Editor
- Conclusion

Future Architecture Overview

FONDUE EDITOR



**IMPORT
EXPORT**

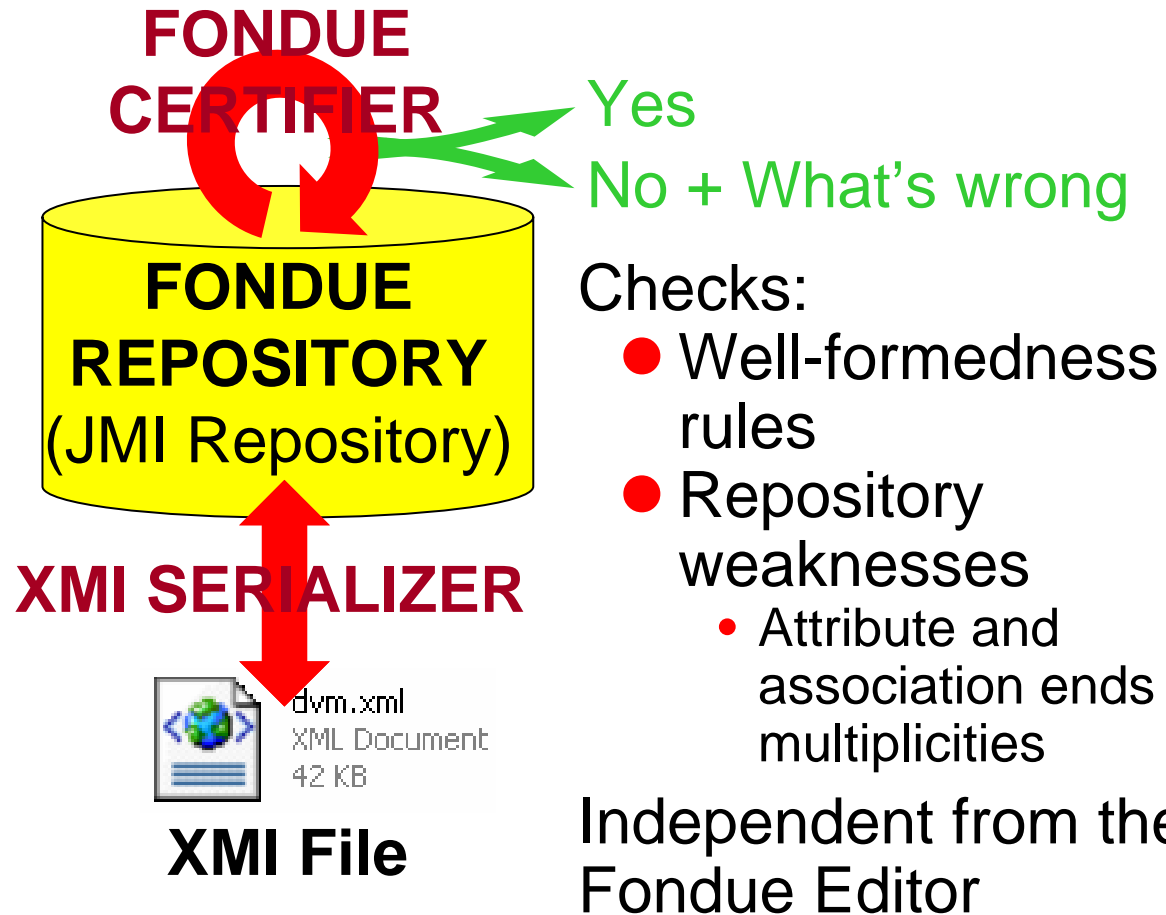


XMI SERIALIZER

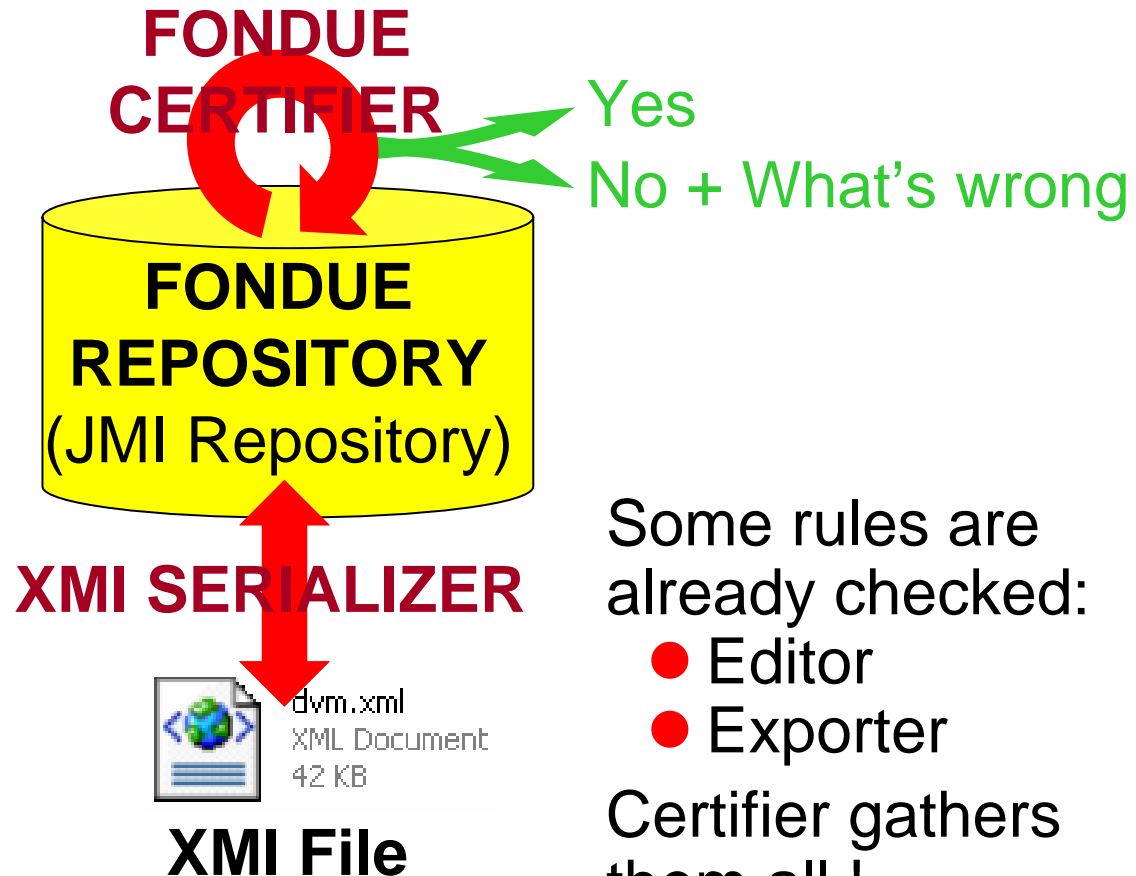


XMI File

Future Architecture Overview

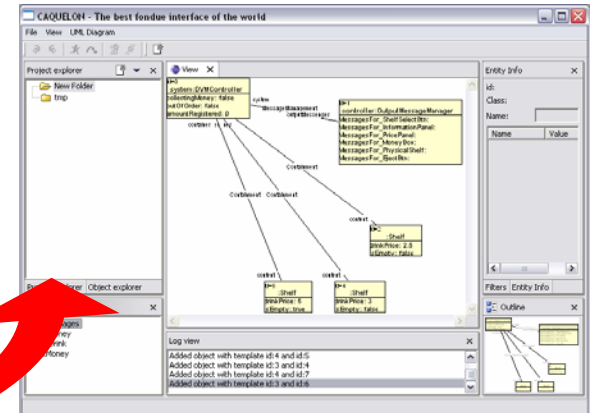
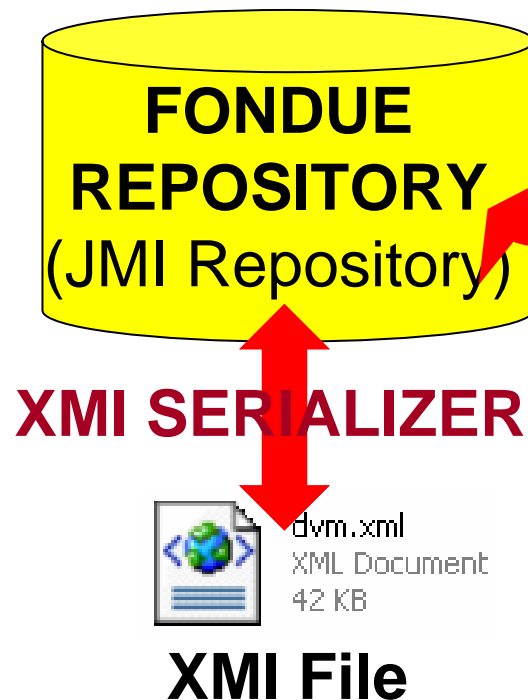


Future Architecture Overview



Future Architecture Overview

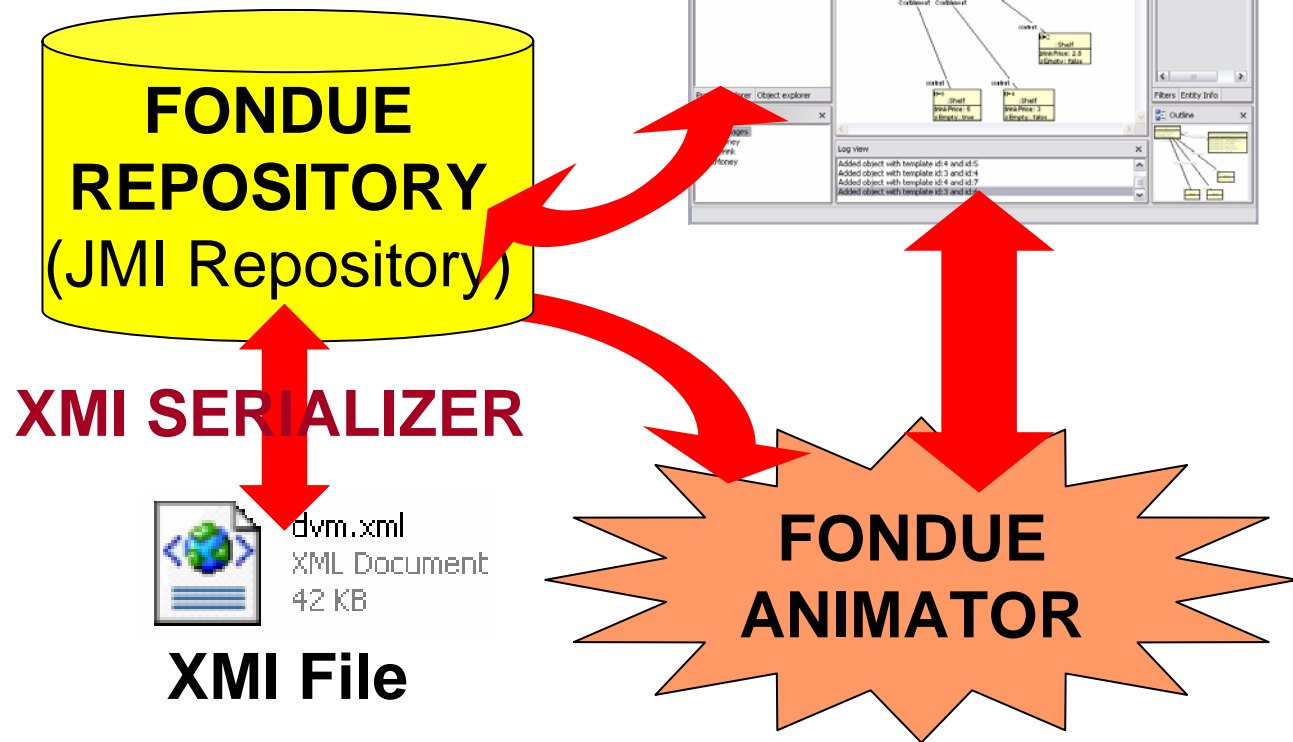
OBJECTS EDITOR



- Verification by Prototyping
 - Makes the system state evolve
 - Only deals with static part
 - Concept Model
- State in the Model

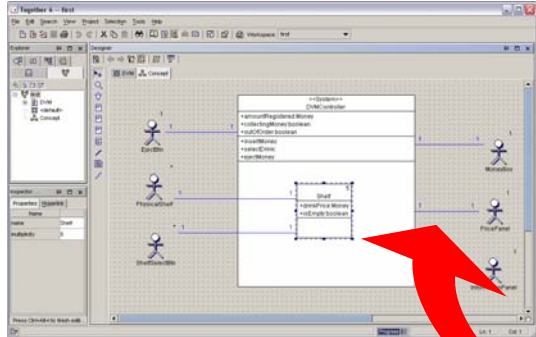
Future Architecture Overview

OBJECTS EDITOR

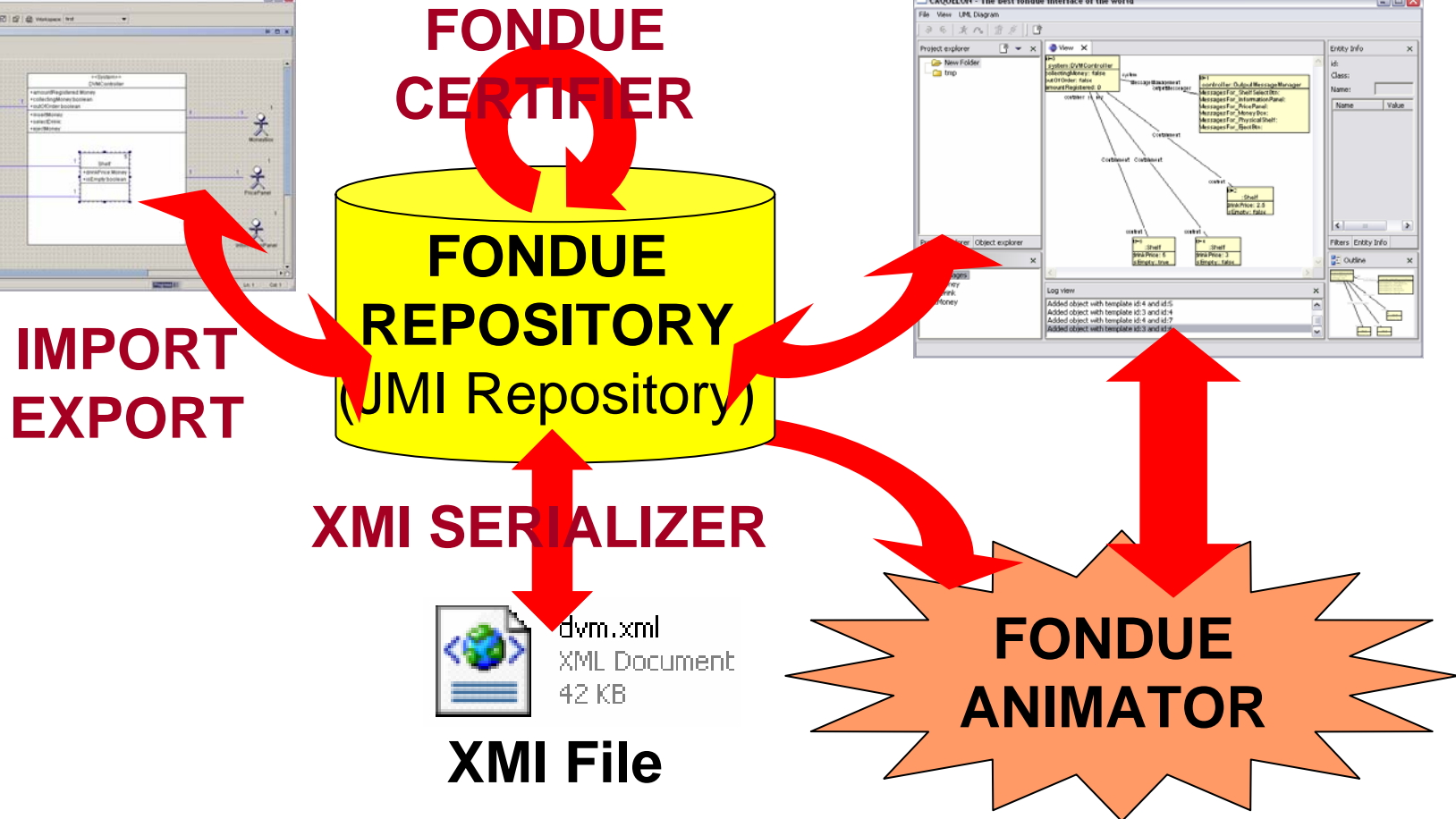
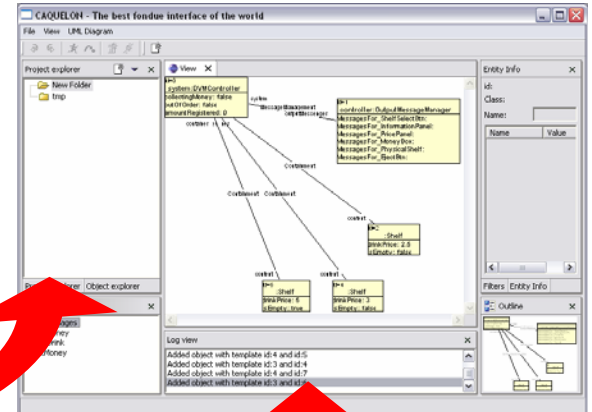


Future Architecture Overview

FONDUE EDITOR

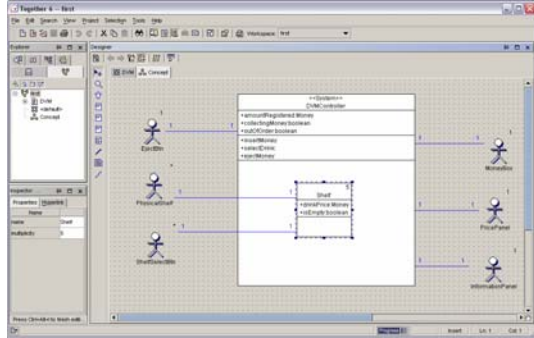


OBJECTS EDITOR

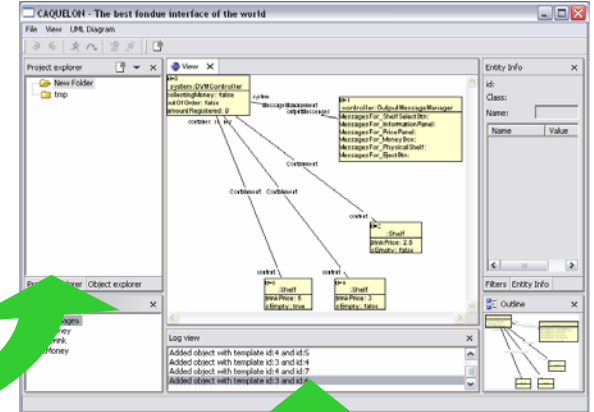


Current Architecture Overview

FONDUE EDITOR

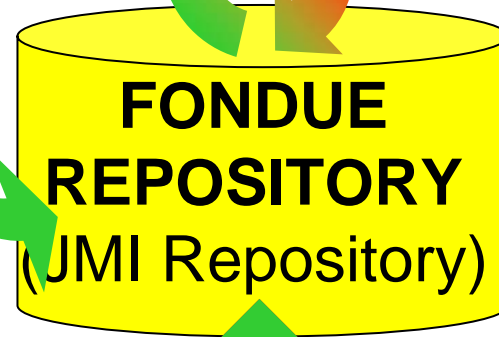


OBJECTS EDITOR



EXPORT
Concept
Model

**FONDUE
CERTIFIER**



XMI SERIALIZER



XMI File

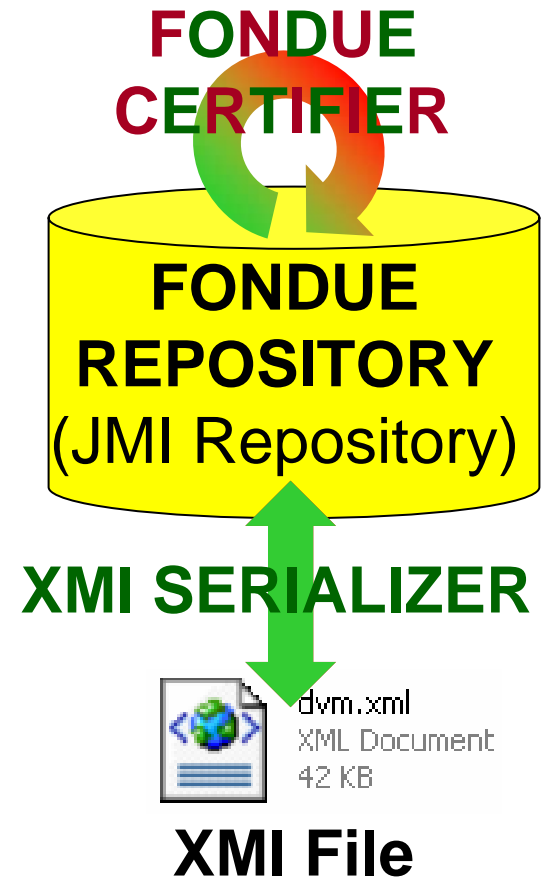
**Hard-coded
DVM
ANIMATOR**

Contents

- Architecture of the Fondue Toolset
- The Certifier
 - Responsibilities
 - A Demo
- The Object Editor
- Conclusion

Architecture responsibilities

- Editor / Exporter check **SOME** rules
 - Some mistakes prevented
 - Editor: Operations in classes
 - Error messages pops-up
 - Exporter: Repeated names
- Repositories are not designed for checking
 - Lower multiplicities
- Solution : check well-defined constraints on the model
 - But we need an official model certifier
 - Independent from the other tools
- Let's see a demo !



Implementation Details

- Well-formedness rules
 - Rules are in the ideal case OCL
 - No evaluation tool available for our architecture
 - OCL is some kind of query language
 - Model transformation languages support queries
 - OCL -> MTL !

Main repository weaknesses:

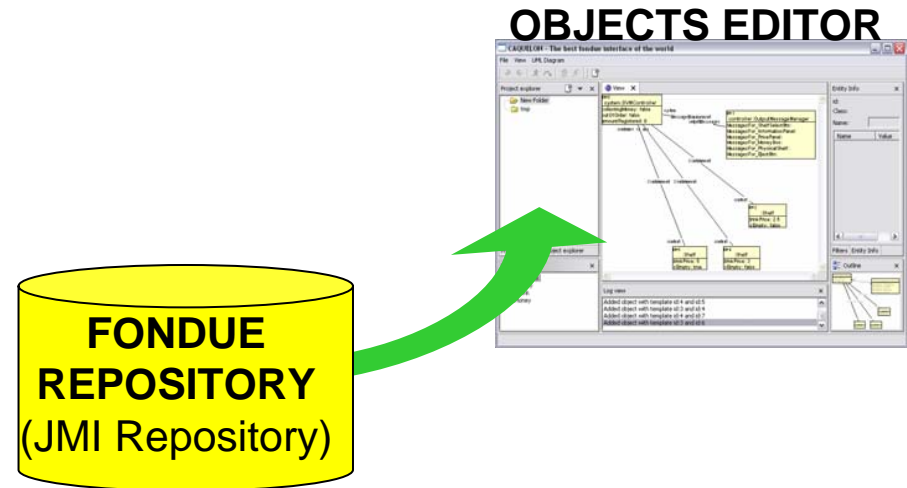
- Lower multiplicities
and Association Subset / Refinement
 - ([1..1], [3..7])
 - Multiplicity information is in the Metamodel
 - Make a transformation from Metamodel to a checking transformation !

Contents

- Architecture of the Fondue Toolset
- The Certifier
- The Object Editor
 - Responsibilities
 - A Demo
- Conclusion

Architecture responsibilities

- At runtime, the state of the system is represented by
 - Existing objects
 - Existing links between objects
 - Attribute values for objects and system
- The object editor
 - Reads the model
 - Especially data description
 - Allows to view and manipulate the state



Additional Features

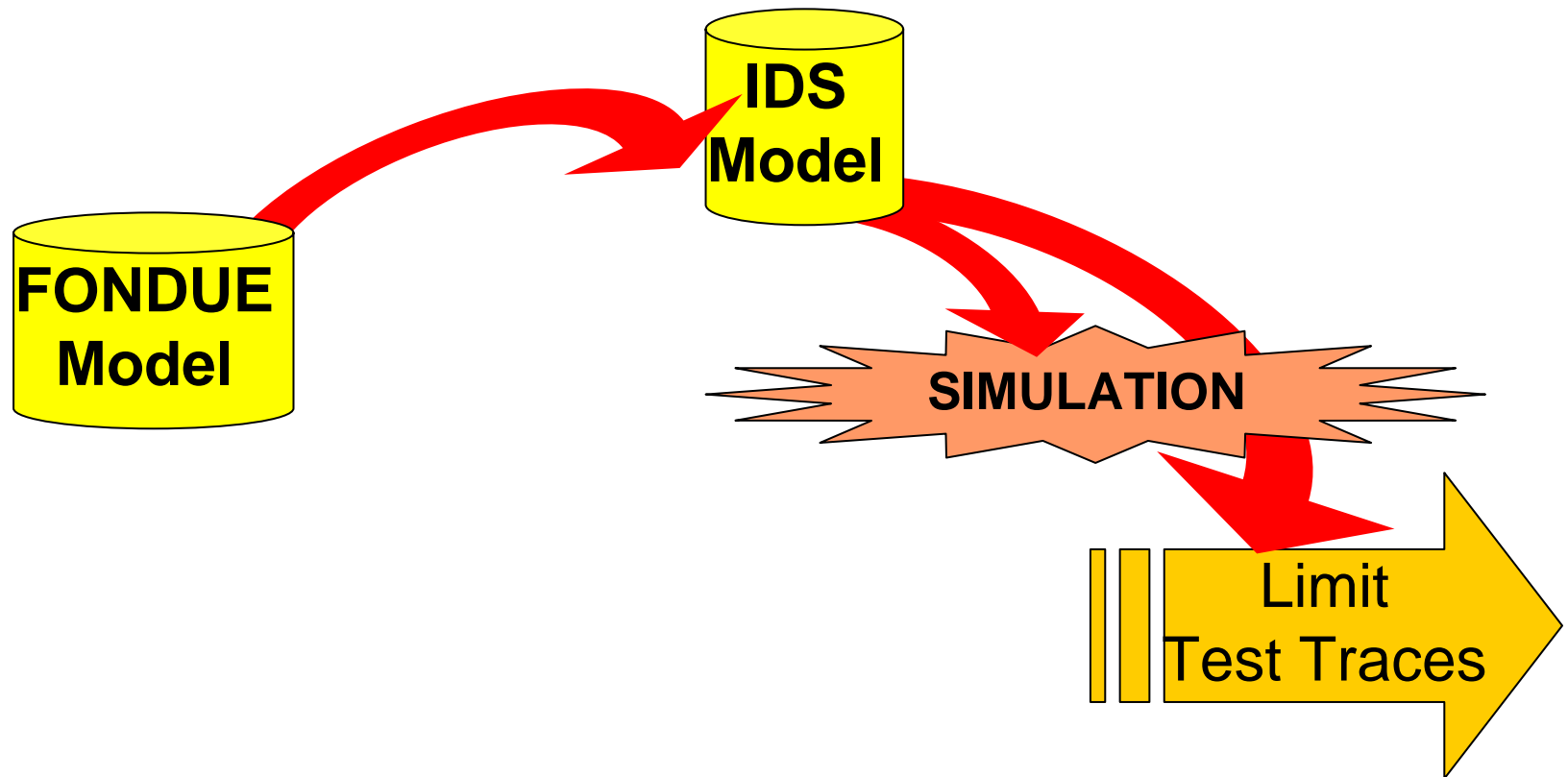
How to deal with large number of Objects ?

- Editing Facilities
 - Several views
 - Zoom
 - Browser
- Filters on Views
 - Filtering Rules on Objects / Links
 - And / Or composition
 - Order Sensitive
- Let's see a demo !
 - With some pieces of animation...

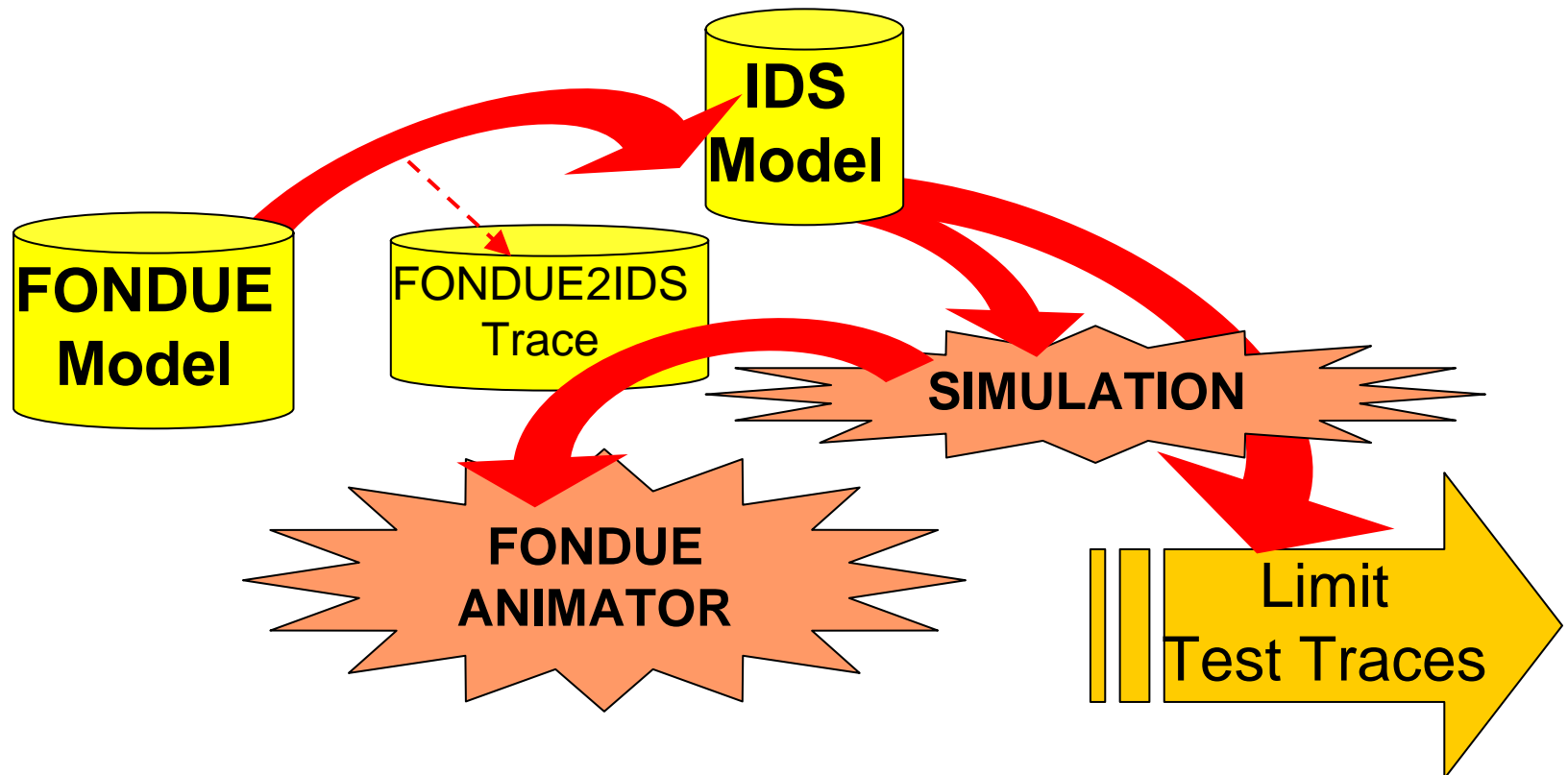
Contents

- Animation tool : the architecture
- A demonstration
- Conclusion
 - The architecture is validated
 - Should have a better tool integration
 - Missing some editors, checking rules...
 - Need an animator
 - I have a phantasm...

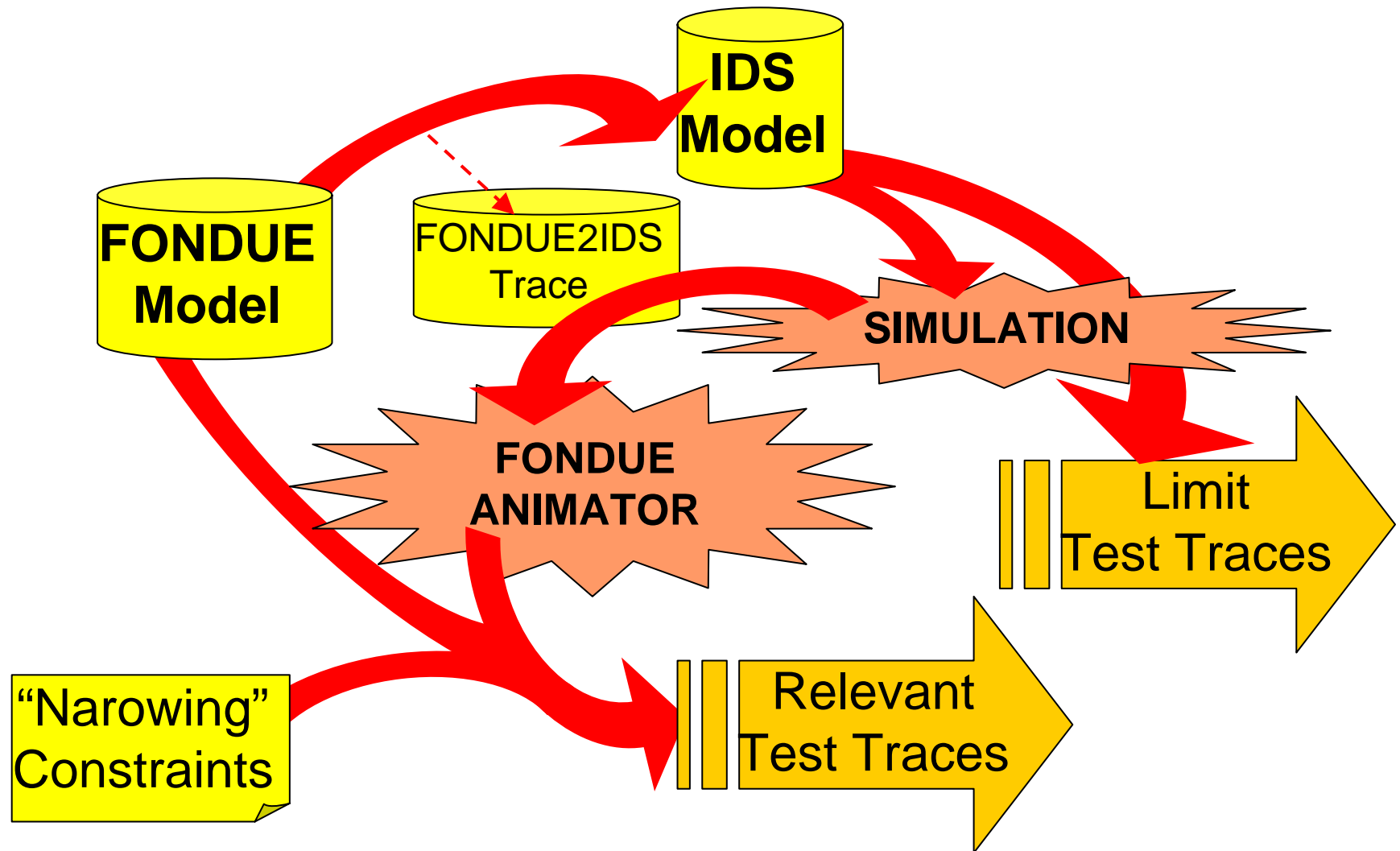
Putting pieces together



Putting pieces together



Putting pieces together



Thank you !

- Any question ?