Model Sharing in Distributed Model-Driven Development

Tom Ritter, Christian Hein
[tom.ritter, christian.hein]@fokus.fraunhofer.de

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ModelBus Model Repository

Motivation

- For transparent addressing of models a global model storage is needed

- ModelBus Model Repository is a lightweight solution serving mainly the purpose of model storage and version control

- There is no universal solution combining all needs
  - Distribution: EMF core has no explicit support for distribution
  - Model-awareness: Subversion is not aware of models
  - Standard protocol support (needed for orchestration)
  - Notifications
  - Multi-User Access Control
  - Versioning
ModelBus Model Repository – Access Control

- ModelBus Repository supports model-driven Access Control, based on user and groups
  - Access to Namespaces can be restricted based on regular expressions
  - By default a user as no access, it needs to be modeled explicitly

- Admin role to allow access on everything

```xml
<ownedUser name="Admin" password="ModelBus">
  <ownedRule rule=".*" mask="-1"/>
</ownedUser>
```

- User is based on User Name, Password
- Mask
  - READ = 1;
  - WRITE = 2
  - EXECUTE = 4;
  - Everything = -1
ModelBus Repository – TeamProvider
### Notification

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Time</th>
</tr>
</thead>
</table>
Locking of Model Elements
Demo Outline
Demo Outline - Deployment

ModelPlex Platform - RSA

TeamProvider

ModelPlex Repository

SVN

INTALIO

BPEL Engine

OCL

ATL

Model Annotator

ModelPlex Platform - RSA

TeamProvider
Access Rights: BusinessProcessModellers Group

```
Resource Set
- platform:/resource/modelbus/system/model/ModelBus.user
  - Model
    - User Admin
    - User User2
    - User User1
    - User Orchestration
      - Rule .*
    - User User3
  - Group BusinessProcessModelers
    - Rule .*/bpmn
    - Rule .*/uml
    - Rule .*/bpmn_diagram
  - Group UmlModelers
    - Rule .*/uml
    - Rule .*/emx
    - Rule .*/efx
  - Group TIS
    - Rule http://www.thales.com/tis
    - Rule http://www.thales.com/tis/projects
    - Rule http://
    - Rule http://
    - Rule http://www.thales.com
    - Rule http://www.thales.com/tis/projects/[\^\.]*
```

→ BPMN

→ UML

User1
Access Rights: UMLModellers Group

- Group UMLModellers
  - Rule .*\.uml
  - Rule .*\.emx
  - Rule .*\.efx

- Group TIS
  - Rule http://www.thales.com/tis
  - Rule http://www.thales.com/tis/projects
  - Rule http://
  - Rule http://
  - Rule http://www.thales.com
  - Rule http://www.thales.com/tis/projects/[\^\.]/*

→UML

User2

User3
Demo Scenario: Part 1

User1

MPLEX PLAT. – WORKSPACE1

BPMN

UML

UPDATE

User2

MPLEX PLAT. – WORKSPACE2

UML

UPDATE

ModelBus Repository

TIS BPMN models

TIS System Models

Business UML models

TEAM PROVIDER functionality

LIGHTWEIGHT REPOSITORY functionality

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Demo Scenario: Part2

ModelBus Repository

- TIS BPMN models
- TIS System Models
- Business UML models

Team Provider functionality

Lightweight Repository functionality

USER2

USER3
Summary

- Initial set of features implemented
- First Release in June 2009

- Additional Information available at:
  
  www.modelbus.org
  www.modelplex.org
  www.cesarproject.eu

  tom.ritter@fokus.fraunhofer.de