OMG!

Aurélien Pupier
R&D Engineer, Studio Project Leader
GMF- Runtime Committer
@apupier

EclipseCon, March 25, 2012
Agenda

- Business Process Management (BPM)
- BPM Notation 2.0
- BPM Solution:
  - Bonita Open Solution
  - Eclipse power
BUSINESS PROCESS MANAGEMENT
What is BPM?

Define and Manage “Business processes” i.e. what happens in a sequence of activities

Eclipse IP policy, Checklist for Airplane maintenance, Arrival of a new employee and more
Why BPM?

- Store and share knowledge
- Automatize activities
  - Speed
  - Quality
  - Monitoring & Reporting
- Continuous improvement
OMG! How to represent my Business Processes?

BPMN 2.0
BPMN 2.0

Business Process Model and Notation

For Business users and Developers

BPM specification:

- Graphical notation
- Serialization
- Semantic execution
## BPMN 2.0 – Graphical Notation

<table>
<thead>
<tr>
<th>BPMN 2.0 Element</th>
<th>BPMN 2.0 Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract Task</td>
<td><img src="image" alt="Abstract Task" /></td>
</tr>
<tr>
<td>Service Task</td>
<td><img src="image" alt="Service Task" /></td>
</tr>
<tr>
<td>Send Task</td>
<td><img src="image" alt="Send Task" /></td>
</tr>
<tr>
<td>Receive Task</td>
<td><img src="image" alt="Receive Task" /></td>
</tr>
<tr>
<td>User Task</td>
<td><img src="image" alt="User Task" /></td>
</tr>
<tr>
<td>Interrupting - Message Start Event</td>
<td><img src="image" alt="Interrupting - Message Start Event" /></td>
</tr>
<tr>
<td>Non-interrupting - Message Start Event</td>
<td><img src="image" alt="Non-interrupting - Message Start Event" /></td>
</tr>
<tr>
<td>Interrupting - Timer Start Event</td>
<td><img src="image" alt="Interrupting - Timer Start Event" /></td>
</tr>
<tr>
<td>Non-interrupting - Timer Start Event</td>
<td><img src="image" alt="Non-interrupting - Timer Start Event" /></td>
</tr>
<tr>
<td>Interrupting - Conditional Start Event</td>
<td><img src="image" alt="Interrupting - Conditional Start Event" /></td>
</tr>
</tbody>
</table>
BPMN 2.0 - Serialization

BPMN DI (Diagram Interchange)

XSD/CMOF

```xml
<xsd:element name="activity" type="tActivity"/>
<xsd:complexType name="tActivity" abstract="true">
  <xsd:complexContent>
    <xsd:extension base="tFlowNode">
      <xsd:sequence>
        <xsd:element ref="IoSpecification" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="property" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="dataInputAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="dataOutputAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="resourceRole" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="loopCharacteristics" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="isForCompensation" type="xsd:boolean" default="false"/>
      <xsd:attribute name="startQuantity" type="xsd:int" default="1"/>
      <xsd:attribute name="completionQuantity" type="xsd:int" default="1"/>
      <xsd:attribute name="default" type="xsd:IDREF" use="optional"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

Key motivation from 1.x to 2.0
BPMN 2.0 – Semantic execution

- Textually defined
- Key motivation from 1.x to 2.0
BOS, A complete open-source solution to handle BPM

BPM SOLUTION
BPM Solution

Software to design and execute BP

Bonita Open Solution:

- Engine
- User Experience
- Forms
- Studio
BOS - Engine

Execute Business Processes

APIs:

- EJB2
- EJB3
- REST
- Java local
BOS – User Experience
BOS – Forms
BOS – Studio

Welcome to Bonita Open Solution 5.6.2

Design
- New Process
- Open a Process
- Import a process

Recently Modified
- demo_1.0
- Credit_Request_Example_1....
- Arrival_of_a>New_Employee...
- MonDiagramme_1.0

Examples
- Arrival of a new Employee
- Buy a Mini (customized Forms)
- Credit Request
- Delivery Simulation (usage of simulation...:
- Request for advanced payment

Learn
- Standalone BPM application generation
- Documentation
  - Access Online documentation
- Training
  - 3/13/12 - Process Modeling (Fr)
  - 3/18/12 - Process Application Development (En)
- Forums
  - Installation
  - Usage, Operations
  - Non-technical discussions

Resources
- bonitasonline
  - Accelerate & secure your projects with BonitaSoft Subscription Pack
- News
  - 2/15/12 - Bonita Open Solution 5.6.2 Now Available
  - 1/18/12 - BonitaSoft Announces 350 Percent Revenue Growth
BOS - Studio

- Eclipse RCP
- Leverage several Eclipse technologies
- 2 Eclipse Committers
- “Best Modeling Product”
- BPMN 2.0:
  - Graphical Notation
  - Import/Export
BOS Studio - Jetty

- Programmatic hot deploy
- “Run” in one-click
Simulation – Generates Report

Order Lifecycle Instances Execution Time
represents the execution times of simulated process instances through the total simulation timespan

Order Lifecycle Execution Times By Instance
represents the key execution times of a process instance regarding all the executed instances

42.77
50.902
90.77
BOS Studio – BIRT (2/2)

Reporting – BIRT Editor embedded
BOS Studio – Greclipse
BOS Studio - SVN

- Automatic commit
- Automatic commit message
BOS Studio – and more

- JDT – connectors to interact with third-parties
- WTP – edit xml files
- Datatools – configure Database connectors
Keep in mind

_processes are everywhere_

_BOS - relying on BPMN2 and Eclipse - is your friend 😊_
To go further

- OMG website:  
  http://www.omg.org/spec/BPMN/2.0/

- Bonita Community:  
  http://www.bonitasoft.org

- “BPMN Method and Style” by Bruce Silver

- Will love to exchange ideas with you 😊
aurelien.pupier@bonitasoft.com

Twitter: @apupier

Eclipse blog: www.bonitasoft.org/blog/category/eclipse

Talk to me about Eclipse Modeling, SWTBot and more

Company: www.bonitasoft.com

Community: www.bonitasoft.org

Twitter: @bonitasoft