A Model-Driven Generation Approach for Web Applications

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Motivation

Goal: fully automatic generation of web applications from UWE models
UWE4JSF

- Implemented as a set of plug-ins for the Eclipse platform
  - Uses technologies from Eclipse Modeling Project: EMF, ATL, JET
- Produces JSF 1.2 applications
- Supports flexible integration of JSF component libraries
- Easy integration of legacy code
- Not restricted to certain application type
- High flexibility in model detail level
Flexibility in model detail level

- How to define queries, data selection, process behavior, etc.?
- **Alternative 1**: Object Graph Navigation Language (OGNL)
Flexibility in detail level (2)

Alternative 2: integrate black box Java handlers

```xml
<queryHandler>
  <node>SearchPerformer</node>
  <queryHandlerClass>musicportal.impl.SearchPerformer</queryHandlerClass>
</queryHandler>

systemActionHandler>
  <activity>Login</activity>
  <action>SystemLogIn</action>
  <systemActionHandlerClass>musicportal.Impl.LoginHandler</systemActionHandlerClass>
</systemActionHandler>
```

“Abstract” presentation element in PIM describes functionality
- e.g.: «selection»

**Question:** how is it realized in the generated application?
- HTML: list, combo box, radio buttons, etc.
- DHTML, flash applet
- Decision might strongly affect usability!

➔ Should be represented in the model
Main Idea

- include model of *component library*
- Define mapping with *UML dependency* to *instance specification*

- Allows integration of comp. libraries like Apache MyFaces Tomahawk, etc.
- Allows integration of custom components
THANK YOU FOR YOUR ATTENTION!

See UWE4JSF

Wednesday, 16:00 – 18:00
Thursday, 09:00 – 11:00