What’s New in EGF?

Benoît Langlois / Thales Global Services
What is EGF?

A Software Factory Tool

Eclipse Generation Factories
EMFT Component project (incubation)
What is EGF?

In Indigo and Juno
What kinds of generations?

- Simple
- Complex

[Model | Text |...] -to-[Model | Text |...]

Orchestration
Off-the-shelf generations
Variability
Generation DSL
Various languages & Tools
The Basics

EGF Metamodel

EGF Pattern

Basic behaviors, dynamic execution

Factory component, task

EGF Portfolio

EGF

Engine Extensions

EGF Engine
EGF Portfolio

EGF

- Engine Extensions
- EGF Engine

Extensibility

- New Language & tools
- New generation formalisms
EGF Portfolio

EGF
- Engine Extensions
- EGF Engine

Off-the-shelf software factories

Portfolios provided with EGF

Enhanced EMF Generation

Build modeler and generator
For continuous integration
(Hudson/Jenkins, Buckminster today)
Enhanced EMF Generation
EMF Generation, html doc

Ecoretools diagram generation
JavaDoc generation

Build modeler and generator
For continuous integration
(Hudson/Jenkins, Buckminster today)

Editor + Generator for Hudson/Jenkins & Buckminster

Build Metamodel extended with new features
4 Formalisms for Generation
Formalism #1  Factory Component

Formalism #2  Task
Factory Component & Task

- Factory Component
- Production Plan (Activity workflow)
- Data exchange between heterogeneous activities

Language Task
- Java
- Acceleo
- ATL

Tool Task
- Jet

Composite Activity Invocation
- Factory Component

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Task – What’s New?

Languages
- Jython
- Ruby
- Ant

Tools
- Jet
- Acceleo
- ATL

New

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Formalism #3

Generation Chain
Generation Chain

Definition of generation at a high level of description

Purpose: to easily define and maintain complex generations
Setting main features for each selected ecore models

A generation chain model is automatically created
Generation DSL – Applied to the EMF Generation

- Concrete Syntax
- Abstract Syntax
- Graphical Representation
- Textual Representation
- [Other Form of] Representation

**Design**

**In Eclipse**

**Implementation**

*Automated translation*

- GenModel
- Factories
- Execution
- Generated EMF Code

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Formalism #4

Pattern
Declarative formalism to process a resource (e.g., model, file)

Implementation in different languages, such as Jet for M2T or Java
For each pattern, query over a resource, e.g. Model (i.e. resource)

Pattern Strategy
Way to apply patterns and a resource together

List of patterns to be applied onto the resource to produce a result

Controller

View

Result

Model (i.e. resource)
Model-to-Text

Post-Processing

Trace (who generates what?)

Pattern Techno

Pattern Comparison
Download

by Eclipse update site
by Almalgam update site

http://wiki.eclipse.org/EGF_Installation