You design
We generate*

Full generation of a J2EE & .NET enterprise application from a unique UML model, through an iterative method
Summary

I. BLU AGE software presentation
II. Application case study: “Cashier Discount Simulator”
III. Questions / Answers
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NETFECTIVE TECHNOLOGY presentation

Key figures
- Workforce: 150 people, of whom 120 are engineers
- Net income: >10%

Four sites:
- Suresnes - France (Headquarters and BLU AGE CENTRE™ Paris)
- Pessac - France (BLU AGE CENTRE™ Bordeaux)
- Montrouge - France (Development center)
- Casablanca - Morocco (BLU AGE CENTRE™ Casablanca)

What is BLU AGE?

BLU AGE software generates J2EE & .NET applications from three types of inputs:

- A detailed analysis – UML
- An exhaustive screen layouts description - XHTML
- Target architecture components – Framework
Design Principles

Model Driven Architecture - MDA: value is in the model, not in the code

- Based on the OMG Standard (Object Management Group)
- Structured business processes modeling
- Platform independent
- Quick integration of technological and functional changes
Generation Method

UML business profiles
- UML annotations
- Stereotypes

UML platform profiles
- Presentation rules
- Validation rules
- Conversion rules
- Operational rules

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‘Cashier Discount Simulator’ case study

- Cashier Discount Simulator: Commercial campaign management

- Functional scope:
  - Authentication
  - Manage campaign
  - Manage operation
  - Manage product offer discount
  - Cashier discount simulator

- Scope: 3 iterations
  - Specific development charge: 250 M/D

- Technical framework
  - J2EE
  - Presentation: JSF
  - Persistence: Hibernate
  - AS: Websphere 5.1
  - DB: MS SQL Server 2000
Methodology: model components

Domain

Scenarios

Needs

Screens
XHTML
BLU AGE Specific Tags

BOs
Class Diagram, inherited Entities, OCL Definition

Entities
Class Diagram, Utilization of stereotyped classes «entities»

Services
Class Diagram, Interface

Controller
Class Diagram, inherited services

Activity
Activity Diagram, Use of methods from the controller

Use Case
Use Case Diagram

Roles
Use Case Diagram

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XHTML mock-up conception

- Produced by Web graphic designers
- To validate web interfaces of the final application.
- Standard tags for setting up web pages
  - `<div class="container">...`
- Specific BLU AGE tags to identify dynamic screen components:
  - `<bluage:Link id="addLine" tovalidate="false" type="dynamic">`
  - `<bluage:AjaxZone id="ticketZone">`
  - `<bluage:Droppable id="dropTicket" sourceid="addLine" styleclass="richpanel">`
UML Business Process Modeling

- UML Modeling: Class diagram
  - BLU AGE stereotypes to enrich modeling
  - Integration of OCL to specify business rules.
UML Business Process Modeling (2)

- UML Modeling: Use Case diagram
  - Definition of business processes managed on application level
  - Identification of roles
UML Business Process Modeling (3)

- UML Modeling: Activity diagram
  - Activity diagrams are defined from a use-case
  - Each use-case can contain several activities diagrams
  - Each activity diagram is « specified » by a class « Controller »
Demonstration: ‘Cashier Discount Simulator’ generation

1. UML Interpreter
   - Configuration file
     - Service layer
     - Business layer
   - Configuration file for persistence tool
     - Hibernate

2. Layer generator
   - Database diagram
   - Business layer
   - Service layer
   - Persistence layer

3. Model Interpreter
   - Screen layout in BLU AGE™ format
   - Parameterised screen layout
   - Functionnal data

4. Screen generator
   - Application pages
   - Technical libraries

5. Packaging application generator

PACKAGED APPLICATION

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Thank you for your attention