CSSE 490 – Model-Based Software Engineering

Project Milestone 3

This third project milestone entails developing the next evolution of Model-Based Software Engineering environment platform. This version goes beyond assembling pieces from the first iteration of the "FacePamphlet" system. It uses "light-weight" transformations to automatically configure the "FacePamphlet" system for various situations.

Components in the repository will have three types of forms:

1. Models (e.g., analysis, architecture, design, implementation, etc.)
2. Language (e.g., source code, scripts, XML, etc.)
3. Configurations (e.g., configuration files for specific customizations, etc.)

Using the components captured in the repository, the "FacePamphlet" system should be generated using the mappings for assembling the product and transformation rules for configuration.

Objective

To design and build a next evolution of the Model-Based Software Engineering environment platform for assembling pieces from the second iteration of the FacePamphlet application from Milestone 2 and introducing transformation rules for configuration.

Due Dates

Documents and code: 11:59 p.m., Friday, Week 7, (April 29th, 2011). Demonstration of the capability should be given at the project lab also Friday, Week 7.

Tasks

This is a summary of tasks that are detailed in the pages that follow.

1. Identify several configuration situations that warrant light-weight transformation in the FacePamphlet application and design a mechanism that would use transformation rules to make the alterations to the assembled code. For example, a simple transform could be provided that does localization for a specific organization (Name, addresses, logos, etc.). A more sophisticated transform set might produce FacePamphlet for another platform by changing any GUI or DB calls to the requisite platform.
2. Design an initial metamodel that accommodates mappings from the components identified in the repository and the configurations along with any transform rules.

3. Using the metamodel and repository, develop a reasonable scenario with the requisite mappings and interfaces to assemble the FacePamphlet application.
4. Demonstrate that the environment you produced can assemble and produce the FacePamplet application at your project lab on Friday of 7th week. Please make sure your instructor is able to access your code on SVN.

Submitting Your Work

Please submit your Milestone 3 document with your operational scenarios, Logical Architecture, Interaction Diagrams, Design Class Diagrams, and the like as a single document to the appropriate Angel dropbox. Please submit a **pdf** file with a cover page containing your Names, Assignment Title, and Date. Please name the document:
MS3-LightWeightTransformEnvironment.pdf.