



AHEAD with FeatureIDE

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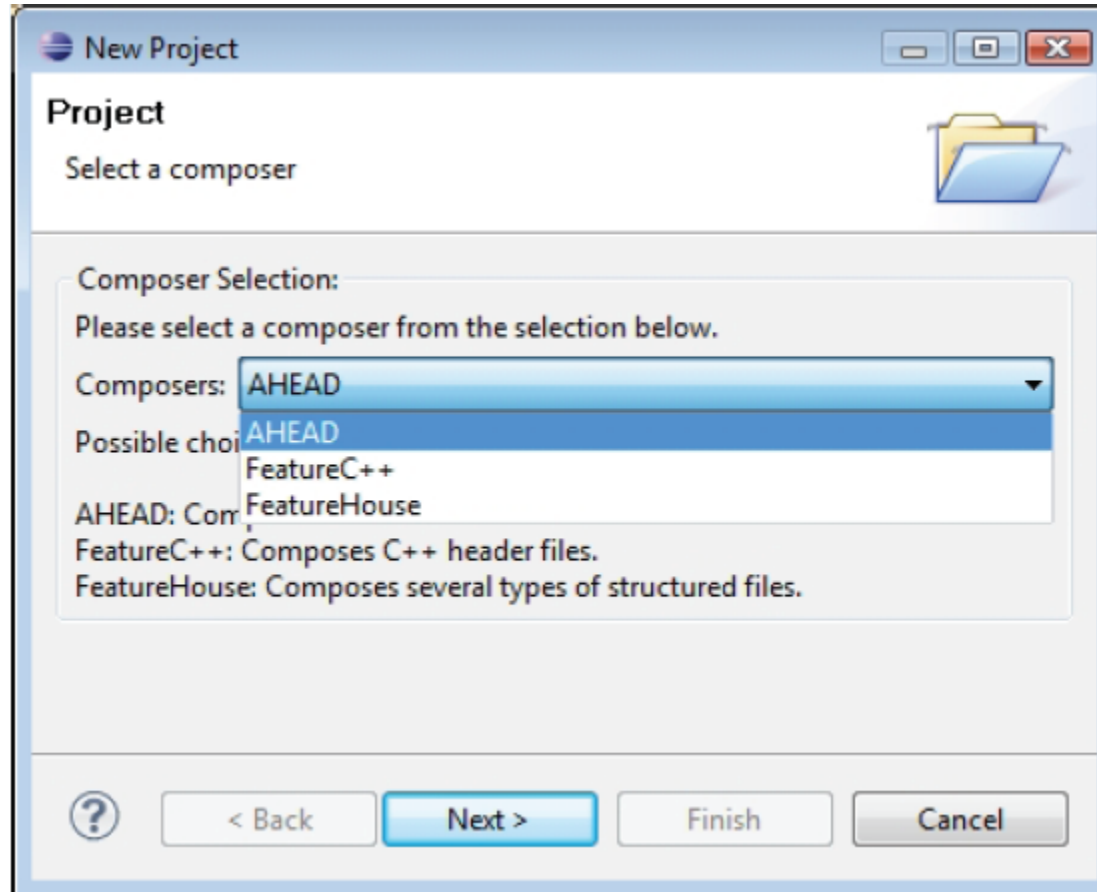
<http://www.dcc.ufmg.br/~figueiredo>

[FeatureIDE]

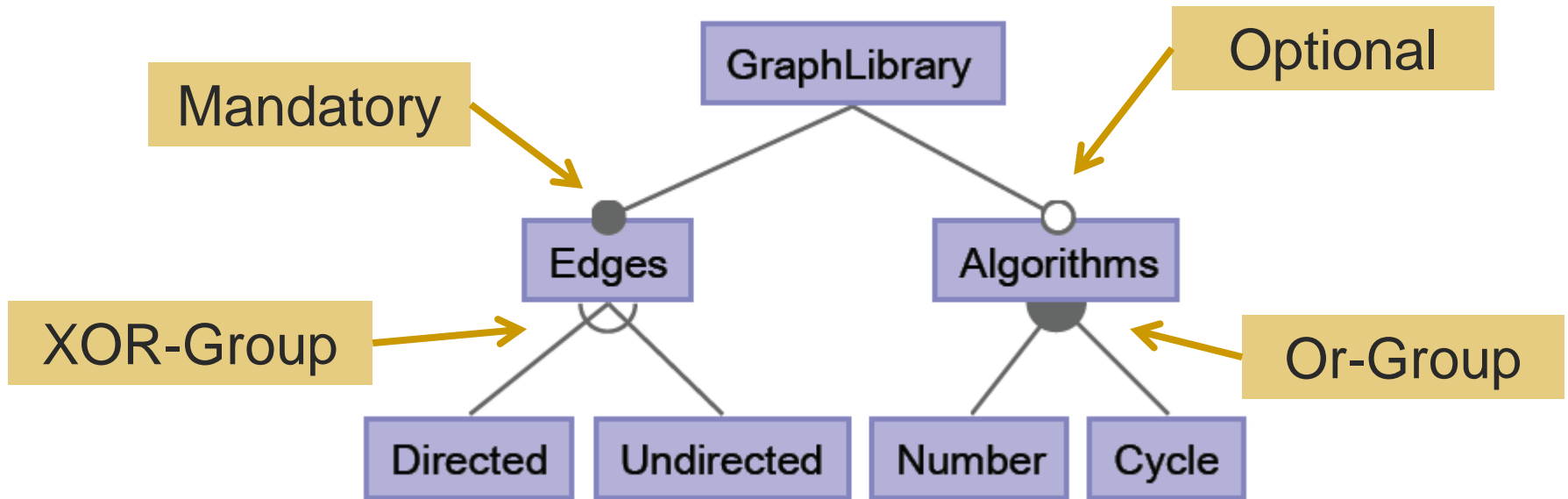
- Eclipse extension for software product line engineering
 - It focuses on feature-oriented programming (FOP)
- It supports several composition languages
 - **AHEAD**, AspectJ, FeatureC++, FeatureHouse, etc.

[Project Wizard]

- It requires selecting a composition language



Feature Model Editor



[Constraints]

- To create cross-tree constraints

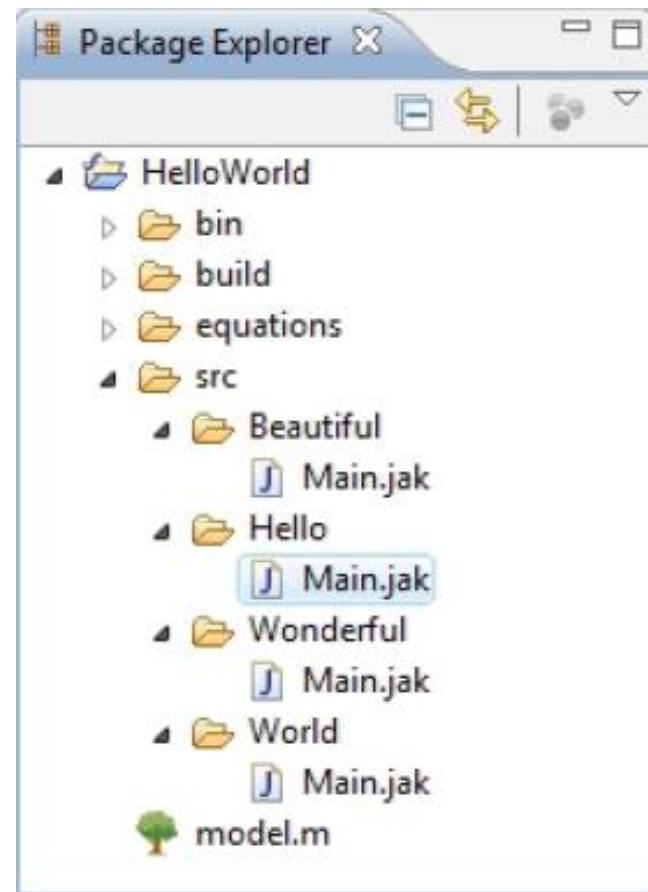
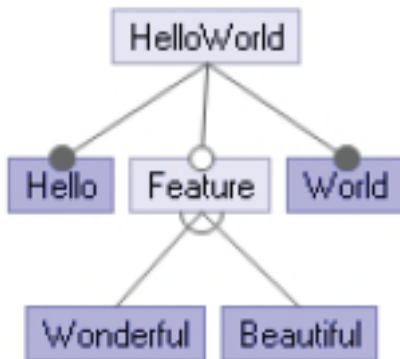
The image shows a software interface with a window titled "HelloWorld Model". Inside the window is a tree diagram with a root node "HelloWorld". It has three children: "Hello", "Feature", and "World". The "Feature" node has two children: "Wonderful" and "Beautiful".

In the foreground, there is a dialog box titled "Create Propositional Constraint". It has a dropdown menu with "Feature" selected, an "Add Feature" button, and an "Implies" button. Below these is a text field containing "Hello implies". At the bottom are "Help", "OK", and "Cancel" buttons.

To the right of the dialog box, a context menu is open over the "Feature" node. It contains the following items: "Create Constraint" (highlighted with a yellow box), "Edit Constraint", "Delete" (with a red 'X' icon), and "Run As". A yellow arrow points from the "Create Constraint" item to the "Implies" button in the dialog box.

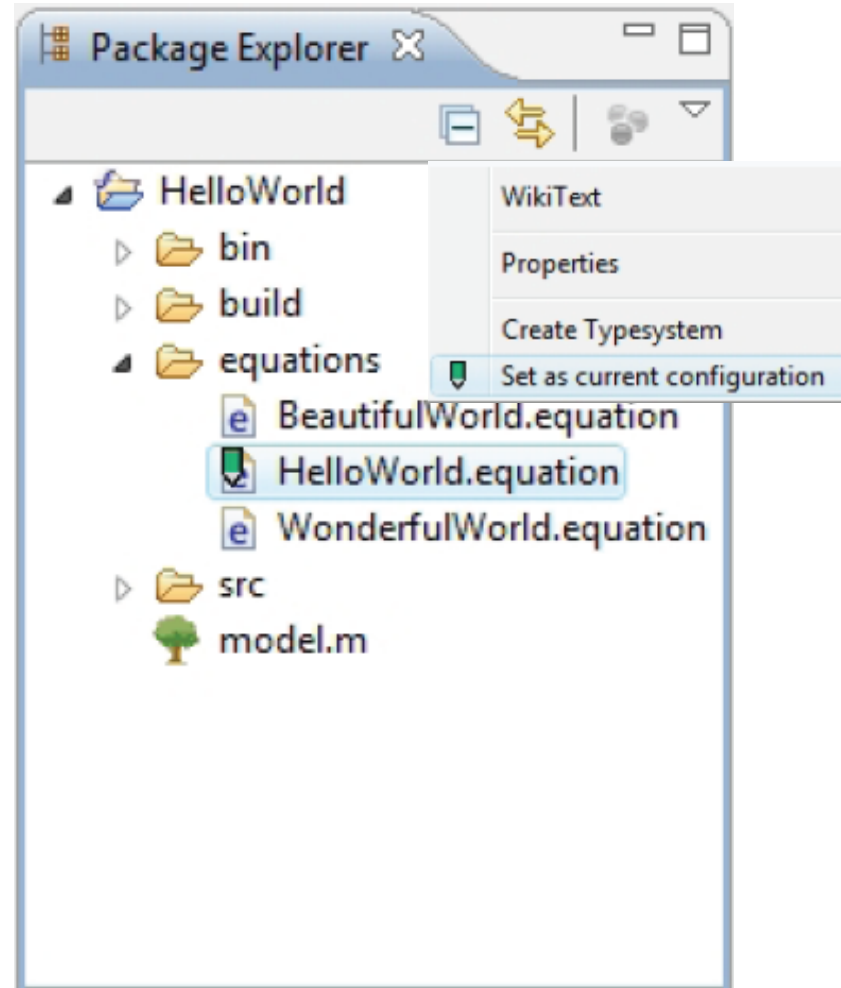
Model to Code

- Source code contains a folder for each concrete feature
 - Including files to compose



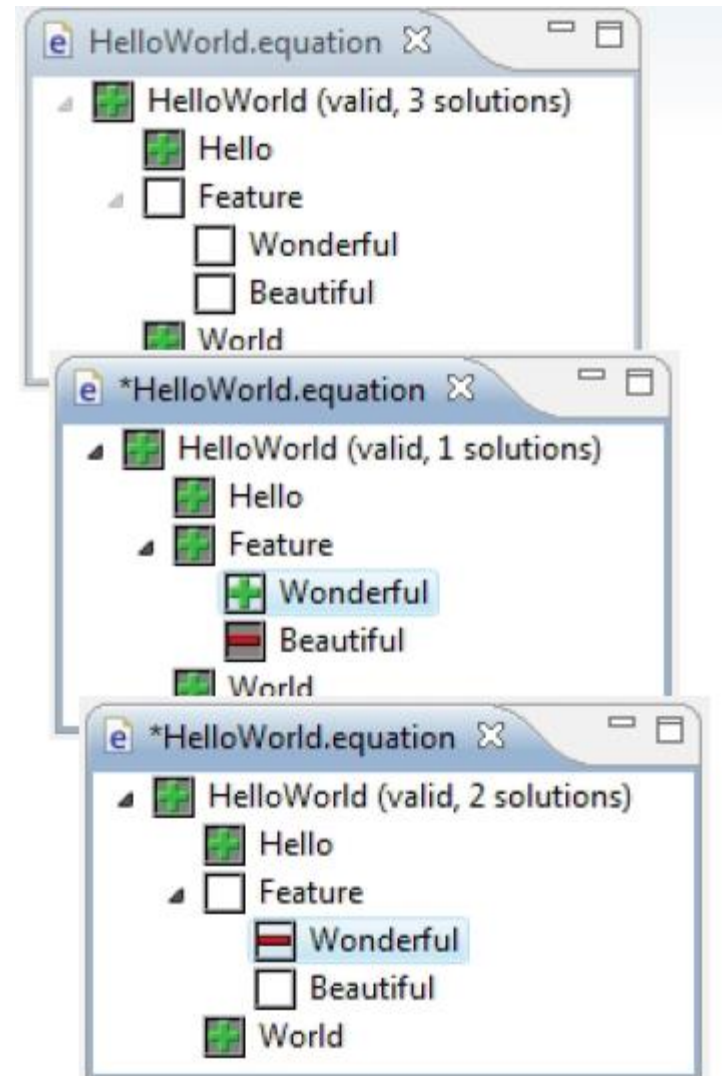
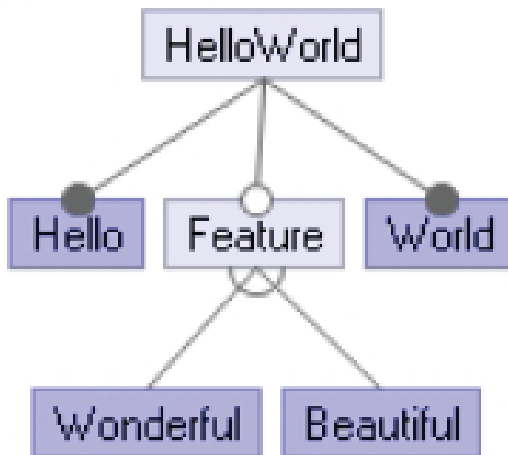
[Default Product]

- The equations folder has configurations of products from the feature model
 - Each equation represents a product
 - Current product is marked

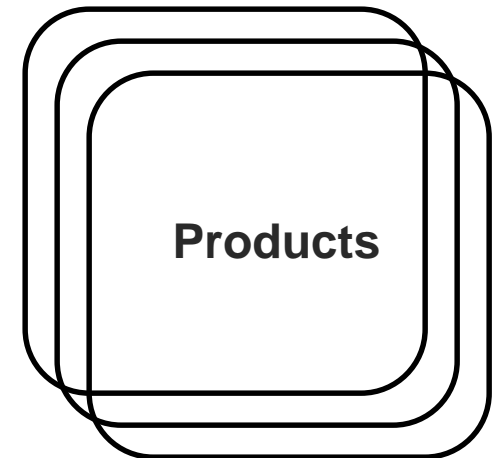
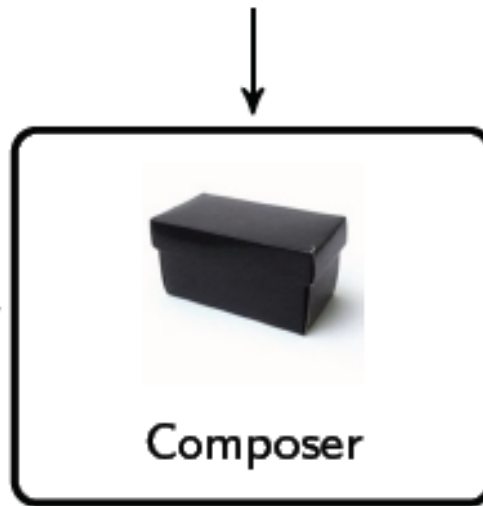
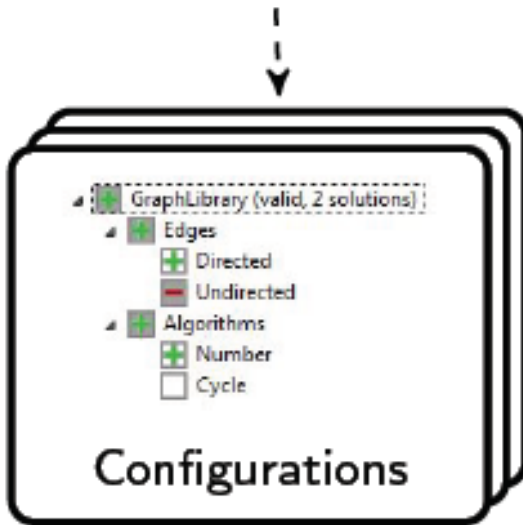
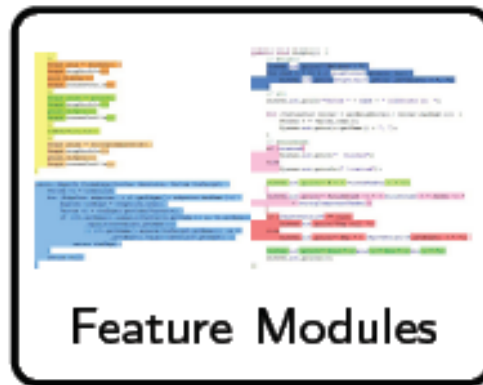
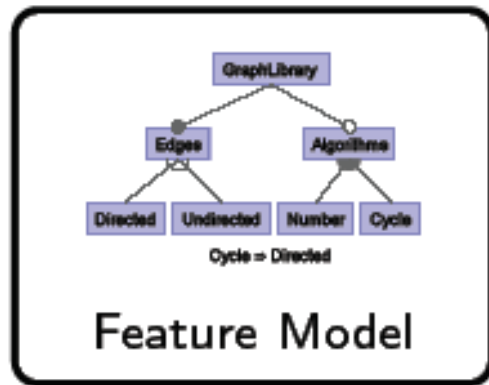


[Product Configuration]

- Manual selection
- Automatic selection
- Consistency check



The FeatureIDE Process



[Bibliography]

- Don Batory. **A Tutorial on Feature Oriented Programming and the AHEAD Tool Suite**. International Conference on Generative and Transformational Techniques in Software Engineering (GTTSE), 2005.