

# Menu

*Topics may target users, developers, or both.*

## **Introduction to Eclipse.**

Eclipse plug-in architecture.

Extensions and extension points.

Project Natures and Builders.

Eclipse Resources, manipulating Projects, Folders and files.

## **What's in a plug-in?**

The Declarative parts:

- Manifest.MF (name, version, dependencies, activator class)

- Plugin.xml (extensions, extension points etc.)

- build.properties

- plugin.properties

sources and libraries.

## **The plug-in manifest:**

Descriptions, versioning, dependencies, runtime (downstream package visibility), (using existing) extensions, (creating new) extension points, builds and libraries.

## **Writing Eclipse plug-ins (Developer).**

Using the new plug-in wizard (Practical?).

Using Extension Points to make extensions.

Workspaces.

Creating projects, folders and files programmatically (Practical).

## **Setting up for development with Rodin.**

Managing Workspaces, working sets

Preferences: platform target, install sites.

Build targets.

Importing/Exporting to/from the workspace.

The workspace: git vs svn.

## **The Eclipse Modelling Framework:**

Metamodels and Ecore,

Generating code: genmodels, sample editors. (Could create a small model?)

GMF and Diagrams.

## **Releasing Plug-ins.**

Features and update sites.

## **Rodin Specifics:**

### **Using Rodin** (mostly practical).

The Rodin UI: Modelling and Proof.

Proof Tactics.

Theories.

iUML-B/State-machines.

Decomposition.

### **The Rodin database:**

bum, bcm, bpo, bpr and bps.

buc, bcc, bpo, bpr, and bps

The API: IInternalElement, IRodinDB, IRodinProject, IRodinFile, IEventBProject, IMachineRoot, IContextRoot .... (Developer)

EventB Formulas, Predicate and Expressions (Developer)

Extracting Data (Practical?)

## **Plug-in Development.**

### **Extending the Rodin UI:**

org.rodinp.core.attributeTypes, org.eventb.ui.editorItems, IAttributeManipulation.

## **EMF:**

Event-B EMF core.

+ Serialisation with RodinDB (Persistence Synchronizers).

Event-B EMF Extensions

Rose Editor.

iUML-B.      Event-B Diagrams, generator

## **Others Technologies:**

Xtext-based machine editor.

Codin development.

ProB model checker.

Camille development.

Code generation.

Using the Java Development Toolkit.

Using the C Development Toolkit.