

Outline

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1 Modelling Interface: Views and Editors

Modelling Interface

Contains 3 views and an editor.

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Modelling Views and Editors: Summary

- Explorer View Showing a tree structured view of the workspace.
 - Connects to the *Database*.
 - Connects to the *Event-B Editor* for editing components.
- Event-B Editor A specific editor for creating and modifying event-B components.
 - Multi-page Editor.
 - Form Editor.
 - Connects with the Database.
- Outline View Showing the tree structured view of the current editing component.
 - Connects with the current active *Event-B Editor*.
 - Provides navigations for the editing component.
- Problems View Showing error/warning messages.
 - Connects with *Event-B Editors* for navigations of error messages.

2 Proving Interface: Views and Editors

Prover Interface

Contains 4 views and an editor.

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Proving Views and Editors: Summary

- Obligation Explorer Showing a tree structured view of the obligations in the workspace.
 - Connects to the Database.
 - Connects to the Prover UI Editor for proving obligations.
- Prover UI Editor Showing the current state of the proof.
 - Showing different set of hypotheses: selected, cached or searched.
 - The current goal.
- Proof Tree Showing the tree structured view of the current proof.
 - Connects with the current active Prover UI Editor.
 - Provides easy navigations on the proof tree (e.g. travel between different sub-goals).
- Proof Control Controlling the proof.
 - A set of buttons.
 - A text field for optional input.
 - Showing proof messages (successful, hint, etc.)
- Proof Information Showing related information to the current obligation.

3 Extending the User Interface

Extending the Modelling Interface

- Adding a new element type (e.g. probabilistic invariants):
 - Implement a form page;
 - Extend the extension point to add this page to the Event-B Editor.
- Adding an attribute to an element:
 - Adding a new column to the editing page (e.g. when adding probabilities to guards), or
 - Editing the new attribute in the detail page (if the attribute needs more space, e.g. multi-line comments).

4 Extending the Proving Interface

Extending the Proving Interface

- Adding a new goal tactic (added to the goal section):
 - Declare a new goal tactic with a new symbol (shown next to the goal) and when the tactic is applicable;
 - Implement the call to new tactic.
- Adding a new hypothesis tactic (added to the hypothesis section):

- Declare a new hypothesis tactic with a new symbol (shown next to the hypothesis) and when the tactic is applicable;
- Implement the call to the new tactic.
- Adding a new global tactic (added to the Proof Control):
 - Add a new button (or extend the current button) in the Proof Control and when this is applicable;
 - Implement the call to the new tactic.

5 To be done next

Next \dots

- Improve the GUI's usability: Adding more buttons, menu, toolbar, to both modelling and proving interfaces, etc.
- Declare extension points.
- Extend the GUI for refinement component.