Présentation Atelier B 4.0

http://www.clearsy.com/

Utilisation

- Téléchargement facile (windows, linux, MAC):
  http://www.atelierb.eu/

- Page Vérimag: ~potet/EJCP-PageB
  - Quelques documentations : manuel installation et utilisation, correspondance symboles mathématiques/ASCII
  - Enoncé des TPs
List of: Workspace, Projects and Components

With the menu “Atelier B → New → Project” create a project: login name

Chose Software development

To open the project double-click in its name in the list
Create a project

- Menu “Atelier B → New → Project”
- Choose the kind of project
  - Software development (B-method)
  - System modelisation (Event-B)
- Give a name to the project and click “Next”
- Click “Finish” to accept the proposed directories for the project files

Add a component

- menu “Projects → Add a component”
Edit a component by double click

Text editor with common editor functions (search, replace, highlight)

Guide with ASCII equivalent for math symbols (double-click to insert)

Document structure to navigate (double-click to navigate)

Also show some syntax errors

Type check

- Save and close editor
- Select the component in the component list
- menu “Component → Type Check”
  - If there is no errors a OK appears in the column “TypeChecked” in the component list
  - If not, the errors appear in the Errors tab
Type check and errors

- Verify if the component is type checked
- Select the component in the component list
- menu “Component → Generate POs”
  - Some errors can appear in the error list (not detected by the type checking)
  - If not, a OK appears in the column “POs Generated” in the component list
  - The number of POs appears in the column “Proof Obligations”
POs interface

- How to see Pos?
  - Activate the interactive proof (right click on the component or click ip)
  - Select «or non « show only unproved POs »
  - Click on the expected operation name
  - proved Ops appear in green, unproved Pos appear in red
  - Click on the PO to see it
  - Quit the interactive prover
Prove the POs automatically

- Select the component in the component list
- menu “Component → Proof → Automatic (Force 0)” (or Force 1)
  - The number of POs that has been proved automatically appears in the column “Proved”
  - The number of POs still to prove appears in the column “Unproved”
- By a right click on the name of the component all operations are activable.
POs interface

Interactive proof

- For POs that can not be proved automatically is necessary to use the “Interactive Proof”
- Select the component in the component list
- Access the menu “Component → Proof → Interactive Proof”
- Use the option “Show only unproved POs” in the Interactive Proof interface
Interactive proof interface

Interactive proof instructions

- F1 in the Interactive Proof interface to bring the manual
- Chapter 2: Basic Notions
- Chapter 11: List of available commands
- Document “preuve interactive” sur la page EJCP-PageB