AADL tools

AADL committee
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Ellidiss Technologies
www.ellidiss.com
Presentation Overview

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- ADELE overview
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AADL Toolbox
supported by Ellidiss

• Modelling (graphics to textual AADL):
  – STOOD 5.2: (commercial) AADL/HOOD/UML graphical editors
  – ADELE: graphical AADL editor in TOPCASED
  – LABASSERT: graphical DSL editor on top of AADL

• Processing:
  – STOOD (static verification, code and doc generation, requirements traceability)
  – CHEDDAR (schedulability analysis) in collaboration with University of Brest
  – Multi-Agents Simulator (AADL model animation) in collaboration with Virtualys
ADELE overview

ADELE graphical editor

ODS tree

ODS form
AADL v2 support

- Most components, features and connections defined in the AADL v2 standard are supported into the ADELE tool.

- Missing: Arrays, Prototypes, Modes, Binding, ...
AADL modelling principles 1/4

- **ADELE model:**
  - Package (library of classifiers)
  - System (instance)

- Instantiation is supported in ADELE by specifying a classifier in the ODS

- Refinement relation is supported in ADELE by specifying super-class(ifiers) in the ODS
Implementation definition is supported into the package diagram editor thanks to the parent/child relation between an implementation and its type.
• The AADL v2 properties are supported in ADELE by a customization of the ODS.
• The behaviour annex of AADL is supported in ADELE by a textual section of the ODS.
AADL
modeling principles 4/4

• Navigation can be done through the outline
• Double clicking on a component opens the corresponding diagram
• Double clicking outside the current container opens its parent diagram
• Drag'n'dropping a component onto an other moves it into this component as one of its children
• Drag'n'dropping a component outside the current container moves it into its container's parent as one of its brother.
Textual AADL generation

- In the tool bar or in the contextual menu in the navigation view it is possible to activate the generation of textual AADL from the graphics.

- The AADL generator is implemented with the LMP engine (also in use in STOOD).
- Some performance issues have been fixed.
ADELE status

• In order to comply with Topcased quality requirements, some documentation can be found on the topcased site (http://gforge.enseeiht.fr/docman/?group_id=73):
  – A user guide (public)
  – An installation and administration guide (public)
  – A software configuration plan (private)
  – A design document for ADELE (private)

• Current versions:
  – ADELE 2.3.0 in TOPCASED 2.3.0 (exp. Features)
  – ADELE 2.3.1 in gforge
Roadmap

• Funding of Adele through SPICES ended in 2008
• New supporting projects for Adele are in preparation:
  – Quarteft: **QUA**lifiable **R**eal **T**im**E** **F**iacre **T**ransformations
  – Lambda: MARTE
• Other tools:
  – Stood 5.3: Q1 2009 (no significant AADL improvements)
  – Stood 5.4: ? support of AADL v2 and MARTE
  – Labassert: new developments planned:
    • AADL graphical viewer
    • Coupling to Cheddar and simulator
  – Setting up a commercial AADL toolbox (2010 ?)