

# ***STOOD, CP HOOD and HRT-UML***

**Mission Critical**

**System & Software Development Environments**



# About Ellidiss

Trading name of TNI Europe Limited  
Headquarters in the **UK**, offices in **F**  
Edits, distributes and supports SW CASE tools:

**CP-Hood** and **Stood**

Involved in many avionics, space, military and ground transportation  
critical SW development, including **Eurofighter**, **A380**



# Our Activities

- **Development, Distribution and Support of COTS toolsets**

- Consultancy:

- Training Courses
- Tool Customization (code generators, ... )
- Project Assistance

*Download site: [www.ellidiss.com](http://www.ellidiss.com)*

*- Stood 5.0*

*- Stood 5.1 beta*

*(with AADL support)*

- **Research & Technology:**

- Model Driven Engineering & Component Based Architectures
- Bridging System & Software modeling activities
- Contribution to R&D programs:
  - ASSERT (ESA, ...)
  - TOPCASED (Airbus, ...)
  - AADL committee

# About STOOD 5

- **Multi-standard system & software modeling tool:**
  - UML2.0, HOOD 4.0, HRT-HOOD and AADL 1.0
- **Enforces a well structured development process:**
  - import of functional and non-functional requirements
  - multi-notation graphical design of the architecture
  - multi-language detailed design and coding (Ada, C, C++, ...)
  - static design verification tools
  - multi-format documentation generators (html, pdf, word, ps, ...)
  - Customisable code generators

# About STOOD 5

**Standalone, light weight, easy to manage**

**Multi-user**

**Configuration management**

**Requirements traceability**

**Unix-Windows interoperability**

# About STOOD 5

**Legacy reverse engineering**

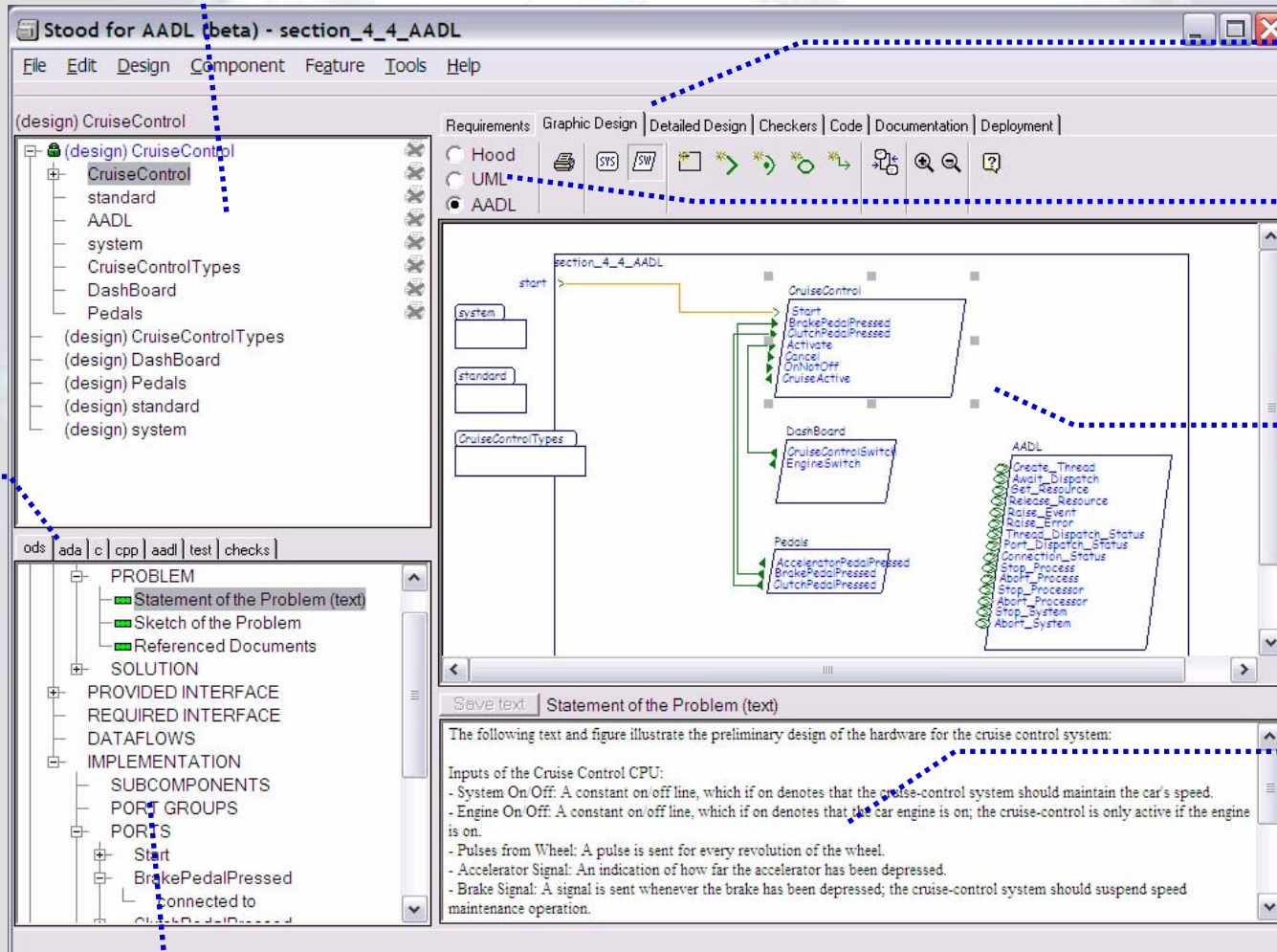
**Round trip editing**

**Has been used on many projects requiring compliance with high demanding industrial standards:**

**DO-178B, EN-50128, ECSS-E40, MIL-STD-498, ...**

# Stood screen view

components



The screenshot shows the Stood for AADL (beta) interface for a project named 'section\_4\_4\_AADL'. The interface is divided into several main sections:

- Left Panel (Project Tree):** A hierarchical tree view showing the project structure. The root is '(design) CruiseControl', which contains sub-elements like 'standard', 'AADL', 'system', 'CruiseControlTypes', 'DashBoard', and 'Pedals'. Below this, there are sections for 'ods', 'ada', 'c', 'cpp', 'aadl', 'test', and 'checks'.
- Top Panel (Menu and Tools):** A menu bar with 'File', 'Edit', 'Design', 'Component', 'Feature', 'Tools', and 'Help'. Below it is a toolbar with icons for 'Requirements', 'Graphic Design', 'Detailed Design', 'Checkers', 'Code', 'Documentation', and 'Deployment'. A 'notation switch' is located here, with 'AADL' selected.
- Center Panel (Graphical Editor):** A large workspace for graphical design. It shows a diagram with components like 'CruiseControl', 'DashBoard', and 'Pedals' connected by lines. A 'lifecycle tabs' section is visible on the right side of this panel.
- Bottom Panel (Textual Editor):** A text editor window titled 'Statement of the Problem (text)'. It contains the following text:
 

The following text and figure illustrate the preliminary design of the hardware for the cruise control system:

Inputs of the Cruise Control CPU:

  - System On/Off: A constant on/off line, which if on denotes that the cruise-control system should maintain the car's speed.
  - Engine On/Off: A constant on/off line, which if on denotes that the car engine is on; the cruise-control is only active if the engine is on.
  - Pulses from Wheel: A pulse is sent for every revolution of the wheel.
  - Accelerator Signal: An indication of how far the accelerator has been depressed.
  - Brake Signal: A signal is sent whenever the brake has been depressed; the cruise-control system should suspend speed maintenance operation.

lifecycle tabs

notation switch

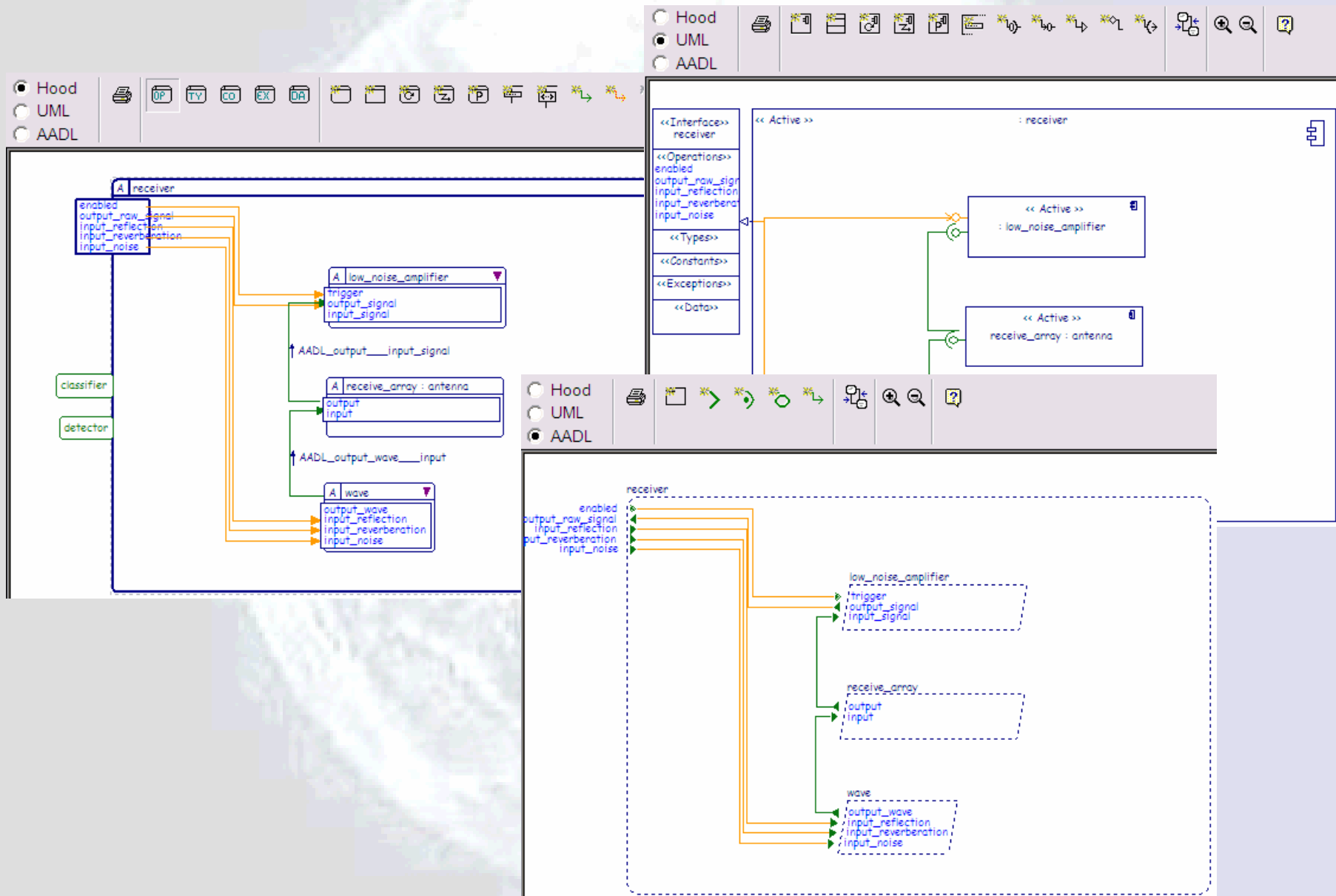
graphical editor

textual editor

filters

features and properties

# Graphical Notations





# AADL News

June 2006

- support of the behavioral annex (Airbus, FERIA)
- legality rules checker
- improvement of the AADL editors:
  - flow specs, port groups, delayed connections, ...
- connection with other products/projects:

# Status

June 2006

- **Current Releases:**
  - Stood v.5.0
  - Stood for the AADL, v.5.1.0 (beta release)
  - download site: [www.ellidiss.com](http://www.ellidiss.com)
  - 60 downloads since 10 January
- **Experience feedback:**
  - feedback from beta testers
  - experiment with Assert Pilot Project
  - internal tests

# Next steps

- Stood for AADL final release:
  - Windows, Linux and Solaris
  - documentation: user manual & tutorial
- Experimenting future language features:
  - Templates (~ HOOD generics)
  - Virtual Processors (~ HOOD virtual nodes)
  - Behavioral Annex (~HOOD pseudo code)
- Conferences and exhibitions:
  - SSTC in Salt Lake City
  - DASIA in Berlin
  - ISD in Noordwijk
  - Ada Europe
  - SIGADA in Albuquerque

# CP-HOOD

## Where have we come from?

### Version 5.5.1

- Enhanced Informal Text Editor (HOTED)
- Introduction of Bulk Import and Export facilities
- Clearing the vast majority of outstanding issues

### Version 5.6

- Enhanced ODS Editor
- Offline update and reconcile of design elements

# CP-HOOD

## Where are we going ?

Version 5.6.1      Due September 2006

- Ada Reverse Engineering

BETA version ready for shipping to test sites

Version 6.0      Due late 2007

- New Window Styled Interface across all platforms
- Enhanced Diagram Editor
- Introduction of PDF document generation
- Intelligent offline update and reconcile facility

# CP-HOOD

## And beyond ...

- Additional platform support for Microsoft Windows
- Ada 95 Support

# HRT-UML

**Developed by Intecs of Italy**

**Ellidiss Software is principal distributor**

**Used widely in Space market**

**Possible replacement for HOOD Nice**

**Operates on Windows and Linux**

**Generates automotive applications**

# MICROSEK

**Developed by Intecs of Italy**

**Ellidiss Software is principal distributor**

**Market standard in Automotive and Railway**

**Operates in conjunction with HRT-UML**