

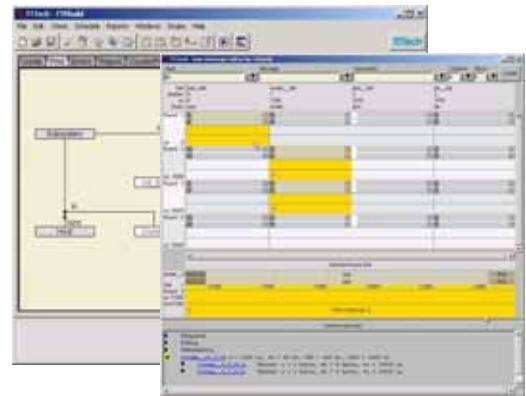
TTP Build

The TTP Node Design Tool

TTP Build is a comprehensive tool for the design of nodes in a TTP® network. It establishes the interface between the communication system and the application. Major steps of the design process are the configuration of the operating system and the communication layer. The automatic generation of schedules and code reduces development time and produces higher-quality interfaces. It's exceptionally easy to update and change the interfaces.

KEY FEATURES/BENEFITS

- Customized MEDL creation
- Configuration of TTP Hardware COM Layer
- Configuration of TTP TD-COM Layer
- Configuration of TTP OS/FT-COM Layer
- Flexible programming/scripting interface
- Precise definition of temporal behavior of tasks
- Optimized task scheduling for TTP OS



Consistent and Complete Design

TTP Build supports the precise definition of the temporal behavior of the tasks in a node and of the messages sent and received by them. Thus, the interfaces between the tasks of the node are completely defined in both the value and time domains. Defining the relevant objects and the relations between them specifies the node design. Communication interfaces are defined for every task. Once the node schedule has been specified,

TTP Build checks the design for correctness at the object, local, and global levels. Inconsistencies can be removed easily. The error browser offers detailed explanations and hyperlink functionality. By simply clicking on an error message, the appropriate form is opened and the error can be corrected.

Task Schedule Generation

Once the model is defined, TTP Build can automatically generate the configuration for different communication layers. TTP Build can generate C-code for a fault-tolerant communication layer (TTP FT-COM), as well as the configuration for the embedded operating system (e.g. TTP OS) used by the node. The operating system configuration integrates the generated TTP FT-COM layer with the application software tasks.

Alternatively, it can provide the configuration for the TTP Hardware COM Layer or the TTP TD COM Layer. Additionally, it generates a customized communication schedule (MEDL – message descriptor list), which is being loaded into the TTP controller of the node.

Features and Functionality

- Consistency check of input data
- High-level and optimal scheduling algorithm for automatic generation of ^{TTP}OS schedules
- Generation of optimized C-code for fault-tolerant communication layer (^{TTP}FT-COM)
- Generation of configuration data for ^{TTP}TD-COM Layer and ^{TTP}Hardware COM Layer
- Schedule and code generation is available for custom-made hardware
- Personalized configuration data (MEDLs) generation for optimized CNI (communication network interface) usage
- ^{TTP}Verify is used for verification of configuration data.
- Support for austriamicrosystems AS8202NF ^{TTP} communication controller
- Support for array-type messages
- Error browser for quick and easy debugging
- Customizable report generator
- Guided mode for first-time users, object browser for experienced users
- Graphical editor for user interrupts
- Batch mode execution for automated usage via script files
- Flexible programming/scripting interface (Python)

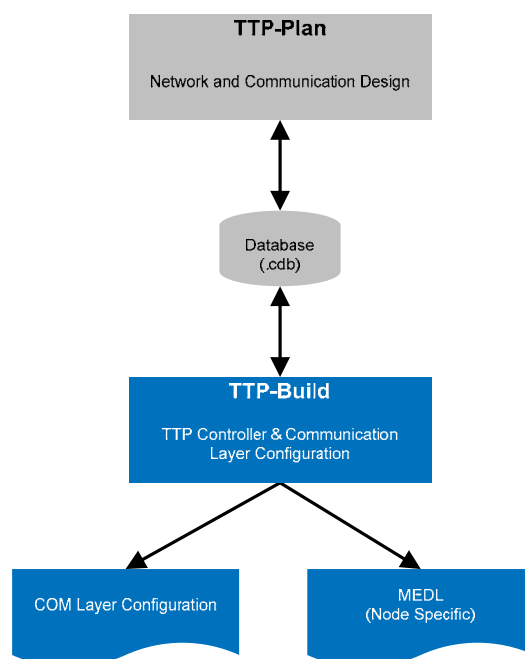
Related Products

^{TTP}Build is part of the ^{TTP}Tools software development suite.

^{TTP}Verify is a RCTA DO-178B verification tool that verifies the MEDLs created by ^{TTP}Build.

^{TTP}Hardware COM Layer is an FPGA-based communication layer supported by ^{TTP}Build

^{TTP}TD-COM Layer is a table-driven communication layer that is enhanced with the RCTA DO-178B verification tool, ^{TTP}TD-COM Verify.



System Requirements

- Standard PC with Windows XP; 1.5 GHz or above; 1 GB RAM

Order Number

- S02.00.5: ^{TTP}Build

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