
TTTech announces new version of development tool suite

Seventh Generation of ^{TTP}Tools for Design of Time-Triggered Communication Systems to Be Released

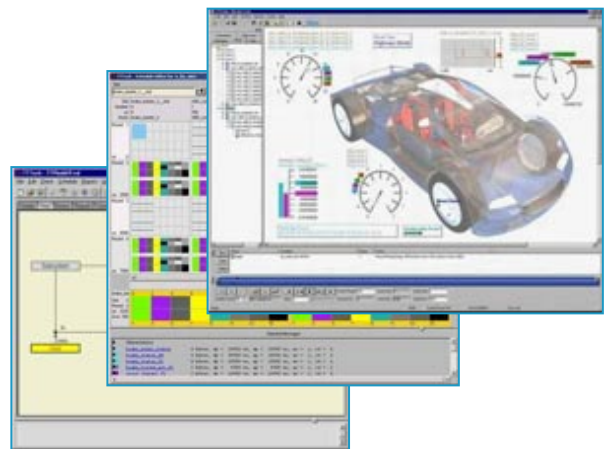
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TTTech, the leading supplier of technology, software products, development hardware, and services in the field of time-triggered systems, announces the 7th generation of its ^{TTP}Tools software development suite. ^{TTP}Tools form a powerful environment for developing safety-critical distributed applications that are based on Time-Triggered Protocol (TTP[®]). ^{TTP}Tools support the entire development process, from rapid model-based prototyping to production-quality code generation. This comprehensive tool chain significantly reduces development time and cost for distributed real-time systems.

Embedded system developers are generally faced with big challenges. Even more demanding requirements are to be met in systems that involve safety and fault tolerance. In addition, the seamless integration of electronic subsystems that originate with different suppliers can be a major difficulty. The combination of the ^{TTP}Tools software development suite and Time-Triggered Architecture provides an integrated platform to these design challenges in the form of a two-level design framework. The 7th generation of ^{TTP}Tools offers new functions that increase development efficiency and improve the capacity and performance of the end product.

Distributed real-time systems often require a mixture of local control functions that run on specific nodes, together with global control functions that use information from other nodes or send outputs to other nodes. TTP provides a reliable and high-performance platform for such systems.

The time where a node is not available is a critical parameter in a safety-relevant control system. The 7th generation of ^{TTP}Tools minimizes this time through the support of a local asynchronous startup and new reintegration strategies. Benefits are higher safety and faster synchronization of local control functions with the global clock.



The 7th generation of ^{TTP}Tools introduces a new fully automated high-performance scheduler for application tasks, operating system tasks and communication tasks. The system uses a variety of advanced methods, such as “tasklets” and improved heuristics in order to find optimal solutions for complex scheduling problems. Tasks are scheduled automatically, while taking into account any defined and system-inherent timing constraints. User-defined timing constraints can be added to the constraints implied by the cluster schedule and the time window. As a result, automatic scheduling supports the development of hard real-time applications and gives developers a tremendous advantage in both cost and time.

In order to provide suitable options with regard to hardware platforms, ^{TTP}Tools offer support for a growing range of processors for embedded applications. Platforms include Motorola MPC555, Infineon C167 and NEC V850e; support for other platforms is offered on request.

TTPTools have a tightly coupled interface with MATLAB®/Simulink® from The MathWorks, Inc. The combination of TTPTools and MATLAB/Simulink provides support, within a single standard development environment, for the entire range of activities associated with development of distributed real-time systems, from functional design, to modeling and simulation, to automatic generation of distributed code, to system configuration, and calibration. The TTPTools interface to MATLAB/Simulink enables automatic code generation via The Mathworks' Real Time Workshop® Embedded Coder. This is an important productivity-enhancer of the TTPTools system. In addition, the 7th generation of TTPTools supports the dSPACE TargetLink® code generator, which is used, especially in the automotive industry.

The 7th generation of TTPTools will be delivered to customers by beginning of July 2004.

About TTTech Computertechnik AG

TTTech Computertechnik AG is the leading supplier of technology and software products in the field of time-triggered systems and TTP® (Time-Triggered Protocol). TTTech products enable developers of automotive, aerospace, and industrial control equipment to deliver reliable embedded systems quickly and efficiently. TTTech's products comprise a complete software development environment for TTP-based systems, including hardware as well as TTP chip models. In addition, TTTech provides a broad range of services, from training courses on time-triggered technology to worldwide product and project support. TTTech especially emphasizes by-wire systems, integrated vehicle control systems, and driver assistance systems.

Further information on TTPTools is available at www.tttech.com or products@tttech.com.

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