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Start of technical Partnership between TTTech and Audi for the Introduction of the innovative Time-Triggered Electronic Architecture

Geneva, Switzerland – February 26, 2001

Today, on the occasion of the Geneva Motor Show, TTTech Computertechnik AG announced a technical partnership with Audi AG, the German premium carmaker. TTTech and Audi AG will cooperate in the introduction of the Time-Triggered electronic architecture for the automotive mass market.

TTTech is very pleased to have Audi as innovative and dynamic technical development partner for first automotive applications. Audi will use the Time-Triggered architecture to implement new vehicle functions in the coming years substantiating Audi's company claim "Leadership through technology innovation" ("Vorsprung durch Technik").

The time-triggered electronics architecture will be the basic platform for a number of key automotive innovations, ranging from integrated vehicle control systems, electromechanical brake- and steering systems (brake- and steer-by-wire) to new applications in the area of collision avoidance.

Contrary to event-triggered electronic architectures, Time-Triggered electronic systems communicate continuously in pre-defined time slots on a data bus among each other. Due to the unique safety architecture of the system, the occurrence of several important events at the same point in time (e.g. braking and steering) does not lead to an overload in the in-car communication system.

In its field of expertise TTTech offers with the Time-Triggered Protocol TTP[®] a standard, which meets the stringent safety requirements of the aerospace industry.

TTP has been developed for twenty years by TTTech co-founder Prof. Kopetz at the Technical University of Vienna. With the support of many leading industrial partners in European research products, TTP has reached series production stage. This new in-car communication system enables new functions at the highest level of safety and comfort. It will be used in automotive, aerospace and industrial control applications.

By employing TTP in different industry segments, an optimal sharing of expertise among those industry segments and TTTech is accomplished.

The secret of success with TTP lies in highly advanced safety features, which have until today only been required by the aerospace industry. This safety level is the most important condition for replacing mechanical systems by purely electronically controlled computer systems. Today TTP is recognized as the fault-tolerant technology of choice for future safety critical systems in the automotive and aerospace industry. TTTech has already initiated the certification process according to FAA standards with aerospace customers. NASA supports this uptake of TTP technology for low cost fly-by-wire systems.

Dr. Stefan Poledna, CEO of TTTech, comments on the announcement of the technical cooperation with Audi in Geneva: "We are very pleased about the technical cooperation with Audi, because it brings the vision of the adoption of the already established fly-by-wire technology to drive-by-wire applications within close reach. "

In addition, TTP offers new opportunities in the area of diagnosis and maintenance for in-car electronic systems: By continuously exchanging time-triggered state messages, all data information is available for customers as well as service stations at all points in time. Another customer benefit is the flexible extendibility of the system. As the time-triggered data exchange is completely pre-determined, individual functions can be developed and tested independently of each other and integrated into the vehicle at a late stage of development.

With TTP, the high tech company TTTech has established itself as the leading company in the area of Time-Triggered systems. TTTech has formed a number of key partnerships with aerospace and semiconductor companies as well as leading research institutions. The technical cooperation with Audi is the most important step for TTTech to introduce the Time-Triggered Architecture into automotive series applications.

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 aerospace, automotive, 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 TTP to worldwide product and project support. TTTech especially emphasizes by-wire and integrated vehicle control systems.

TTTech's subsidiaries – TTChip Entwicklungsgesellschaft mbH, TTControl S.r.l. and TTTech Germany GmbH – respectively focus on development of chip models, control systems for special vehicles, and advanced vehicle dynamics. TTTech North America Inc. and TTTech Japan provide on-site engineering and sales support in North America and Japan.

Further information on TTTech is available at www.tttech.com.

Press Contact

Katrin Klinger
PR and Marketing
TTTech Computertechnik AG
Schoenbrunner Strasse 7
A-1040 Vienna, Austria
Tel. +43 1 585 34 34-0
Fax: +43 1 585 34 34-90
E-mail: pr@tttech.com

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