

Special Vehicle Manufacturers and Suppliers Join TTA-Group

TTA-Group Announces Foundation of Steer-by-Wire Working Group

Market leaders from the off-highway and special vehicle industries have joined the TTA-Group, a cross-industry consortium for time-triggered systems, to cooperate in its Steer-by-Wire Working Group. The mission of the working group is to define a certifiable reference architecture for a complete steer-by-wire application, without mechanical backup, for on-road and off-road use. The system's data communication is based on Time-Triggered Architecture (TTA).

Core activities of the working group include harmonization and development of standards and regulations. The working group's goals also include the derivation of functional and safety requirements, the generation of a technical template, and the concrete implementation of a system architecture.

The working group aims to develop a global guideline as base for a de-facto standard in order to enhance reliability, interoperability, and safety for steer-by-wire in special vehicles. A reference architecture will be defined to demonstrate that steer-by-wire is achievable at affordable costs. The development will be carried out by the members of the steer-by-wire working group. Supervising inspection organizations will be involved in the process from the beginning and will approve the final concept. RWTÜV/TÜV Nord has already contributed essential parts to set up a concept for developing a safe steer-by-wire model architecture.

The certifiable reference architecture will be based on TTP® (Time-Triggered Protocol), a low-cost and safe communication protocol that fulfills the maximum safety requirements at the aerospace level. In order to implement safety-critical, dependable applications such as steer-by-wire it is necessary that in-vehicle communication systems function under extremely harsh conditions. Time-Triggered Architecture is the ideal solution for these requirements.

"Research and development costs are minimized by cooperating on platforms. This will result in high cost efficiency for manufacturers and suppliers," states Finn Visgaard, Director Steering at Sauer-Danfoss. He further states that "common work on concrete implementations of an architecture will allow a smoother homologation process; upfront investments in setting up the right process will shorten time-to-market."

TTA-Group's standardization activities are focused on development of standard platforms. A clear line is drawn between cooperation and competition. Companies cooperate on the platform level to facilitate adoption of a global standard that will support proprietary development and improve quality. At a later time they will compete on functionality. This leaves abundant room for all members to create competitive advantages.

The vehicle manufacturers CNH (Case and New Holland), John Deere, Liebherr, Still, and Volvo Wheel Loaders, and the component suppliers Carraro, Dana, Eaton, Lord Corporation, Ognibene, Sauer-Danfoss, SKF, and TTControl have joined TTA-Group and thus benefit from the advantages of the working group. Supervising inspection organizations are RWTÜV/TÜV Nord, which joined TTA-Group as an affiliate member, and TÜV SÜD, which joined as a research partner.

**Press Announcement
for Immediate Release**

TTA-Group

About TTA-Group

TTA-Group is a cross-industry consortium for highly dependable time-triggered systems. Its objective is to share experience and distribute know-how in the area of safety-critical data communication. Members benefit from the successful deployment of data communication systems for safety-critical applications that fulfill safety requirements at the aerospace level at low cost.

Further information on TTA-Group can be found at www.ttagroup.org

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