"CiA as organization will still grow and promote Classical CAN as well as CAN FD in all markets"

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What was the objective behind venture of CAN in Automation (CiA)?

When I initiated the foundation of the nonprofit CAN users' and manufacturers' group, I was an editor for technical magazines. I just liked to help the very first non-automotive CAN users to developed additional specifications to make products interoperable. Additionally, I hoped to promote the CAN technology, which fascinated me.

What makes CiA value proposition than other fieldbus networks for machine builders (OEMs)?

The higher-layer protocol CANopen developed and maintained by CiA is really manufacturer-independent. There is no single big party promoting this application layer. This is of interest for OEMs, they also may influence the further development of CANopen and its associated profile specifications.

In what way CiA benefits manufacturing industry?

CiA provides manufacturer-independent specifications. Most important for machine builders are the CANopen profiles. CiA also provides seminar and education services as well as manufacurer-independent testing of

CANopen devices on conformity and interoperability.

Which are the main industries can improve manufacturing strength through CiA?

All industries requiring a multi-drop communication to control machines may benefit from CiA specifications. This includes all kinds of machine builders (from textile to plastic processing), medical device manufacturers as well as producers of mobile machines (construction, agriculture, forestry, etc.). Other applications include wood processing, furniture production, logistics, service robots, etc.

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Industrie 4.0 and the Industrial Internet of Things (IIoT) technologies adoption are essential for safety of the plant, people and assets, how CiA and member companies are working towards these technologies?

CiA has developed and internationally standardized the CANopen Safety protocol in EN 50325-5. It is already in use since many years in several applications. The routes are going back to 1999.

Regarding IIoT, CiA members develop the CiA 309-5 specification providing access from the Internet using functional addressing. Generic gateway specifications for CANopen-to-TCP are already available (CiA 309 series) and in use, since more than 10 years.

Where do you see CiA in 3 years' time?

To be honest, CiA members need in minimum four years to bring the improved CAN data link layer, better known as CAN FD, on the roads. In 2020, the first road vehicles with embedded CAN FD networks will be available. In the same time frame, non-automotive users will adapt CAN FD and develop CANopen FD. CANopen FD will be used for high-performance applications requiring higher bit-rates as 1 Mbit/s. Up to 5 Mbit/s seems to be realistic when using bus-line topologies with very short stubs.

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In respect to CANopen, the profiles are already adapted by other communciation technologies, e.g. some industrial Ethernet solutions including Ethercat and Powerlink. CC-Link has just adapted the CiA 402 motion profile. Other implementators use CANopen profiles on EIA 232/485, USB, etc. Besides the CAN and CANopen development and promotion, CiA will become the communication technology inpendent home of device, application, and interface profile specifications. This includes generic, application-independent profiles as well as dedicated profiles for lifts, for subsea sensors, refuse collecting vehicles, extruder downstream devices, etc.   «