

# CAN Newsletter Online

CLARIFICATION

## ISO CAN FD or non-ISO CAN FD

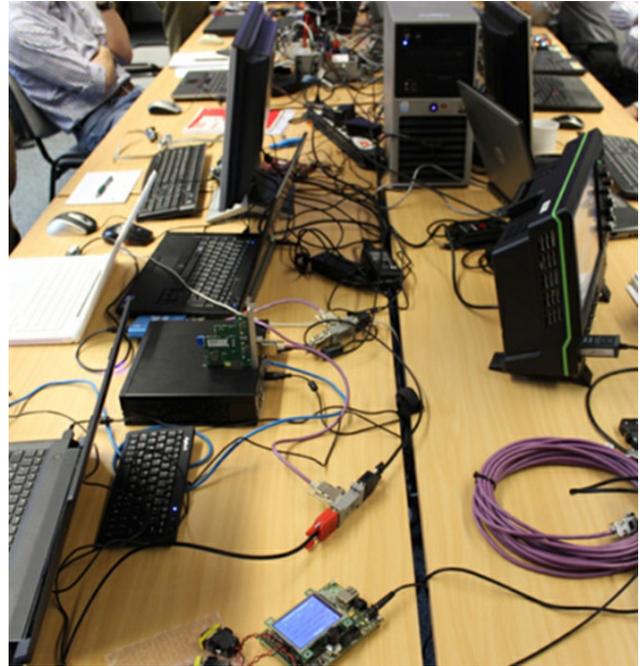
**No doubt: in future all products will be compliant to the ISO standard (ISO 11898-1). But currently some components and tools still support the original CAN FD protocol, which is not compliant to the ISO standard.**

IN ORDER TO AVOID MISUNDERSTANDINGS, CAN in Automation (CiA) recommends using the terms "ISO CAN FD" and "non-ISO CAN FD". All products compliant to the upcoming ISO standard 11898-2:2015 should be called "ISO CAN FD". Products implementing Bosch's original protocol should be named "non-ISO CAN FD". They will be on the market for an intermediate phase – mainly for evaluation and pre-development purposes.

The CAN FD protocol has been changed to improve the failure detection capability. In particular, a 3-bit stuff-bit counter was introduced and an additional parity bit. Also, the value for the CRC calculation has been changed. These improvements make the ISO CAN FD protocol incompatible to the original CAN FD protocol developed by Bosch. The responsible ISO working group has finalized its document and has submitted it for the DIS (Draft International Standard) voting procedure.

"CiA will use the proposed terminology in all of its publications," said Holger Zeltwanger, CiA Managing Director. "We ask all CAN FD product and service providers to do the same. There should be no data-sheet stating that the product is CAN FD compliant without the prefixes 'ISO' or 'non-ISO' indicating which protocol is implemented."

The CAN high-speed physical layer is also under review. In order to harmonize the terminology and to avoid specification inconsistencies, the ISO 11898-2, ISO 11898-5-, and ISO 11898-6 standards will be merged to ISO 11898-2:2015. The ISO working group has submitted the merged document for CD (Committee Draft) balloting to the ISO Central Secretariat. Engineering samples of transceiver chips fulfilling the additional requirements regarding bit symmetry are already on the market. For those products the compliancy reference should be made clear too: ISO 11898-2:2015 or ISO 11898-2:2016 depending on the real publication date.



*The products tested during the last CAN FD plug fest supported the non-ISO CAN FD protocol; they will be updated in order to be compliant with the ISO standard (Photo: CiA)*