

25th anniversary of SAE J1939

In 1994, the nonprofit SAE association released the first J1939 documents. In the meantime, application-specific network solutions have been developed, which are based on the J1939-2 application layer.



Originally J1939-compliant networks were used in heavy-duty road vehicles for the U. S. market; today most commercial trucks are equipped with multiple J1939 networks (Source: Adobe Stock)

The complete article is published in the [December issue](#) of the CAN Newsletter magazine 2019. This is just an excerpt.

Originally, it was not intended to map J1939 messages to the CAN data link layer. But the introduction of the extended frame format enabled the mapping of the 8-bit source and the 8-bit destination addresses into the 29-bit identifiers. In 1994, SAE released the J1939-11 high-speed physical layer, the J1939-21 application layer (unfortunately titled wrongly as data link layer), and the J1939-31 network layer specifications. Nowadays, there are much more parts released including those for functional safety and network management.

The J1939 application layer was also adapted by other industries. One example is the agriculture machine industry. The ISO 11783 series, released in 2007, references the SAE specifications and adds some specific functions. The article provides also information about other standards based on J1939 including those, which are under development.

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