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English Version

**Public transport - Road vehicle scheduling and control systems -
Part 6: CAN message content**

Transports publics - Systèmes d'ordonnancement et de
contrôle des véhicules routiers - Partie 6: Contenu de
messages CAN

Straßentransport- und Verkehrstelematik - Planungs- und
Steuerungssysteme für Straßenfahrzeuge - Teil 6: CAN
Nachrichteninhalt

This Technical Specification (CEN/TS) was approved by CEN on 27 June 2004 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Foreword

This Technical Specification (CEN/TS 13149-6:2005) has been prepared by Technical Committee CEN/TC 278 "Road Transport and Traffic Telematics", the secretariat of which is held by NEN.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This Technical Specification is part 6 of EN 13149, which gives rules for on-board data transmission systems.

This part 6 together with part 4 and part 5 describes a complete solution independent from part 1, part 2 and part 3.

This document uses terms which are already used in other standards e.g. ENV 12896:1997 "Public transport - Reference data model", when applicable.

1 Scope

This Technical Specification specifies the choice and the general application's rules of an onboard data transmission bus between the different equipment for service operations and monitoring of the fleet. This applies to equipment installed onboard buses, trolley-buses and tramways only as part of a bus fleet operation. It excludes tramways when they are operated as part of a train, subway or metro operation. This equipment includes operation aid systems, automatic passenger information systems, fare collection systems, etc.

The equipment directly related to the safety-related functioning of the vehicle (propulsion management, brake systems, door opening systems, etc.) are excluded from the scope of the present standard and are dealt with in other standardisation bodies.

For the described application two bus systems are standardised. Part 1 to part 3 describe the WORLDIFIP bus system and part 4 to part 6 describe the CANopen bus system. There is no ranking between the two bus systems.

This Technical Specification covers the link between equipment inside a single vehicle. Although it could be applied to multiple vehicles, this application is not explicitly covered by this standard.

Part 4 of this European Standard specifies the CANopen-based network. This specification describes the general architecture in terms of hierarchical layers according to the ISO reference model for Open Systems Interconnection (OSI) specified in ISO 7498.

Part 5 of this European Standard specifies in detail the connectors and the connector pin assignment and the cabling.

Part 6 (this document), which will be published as a Technical Specification specifies in detail the application profiles for the virtual devices in public transport.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13149-4, *Public transport - Road vehicle scheduling and control systems - Part 4: General application rules for CANopen transmission buses.*

EN 13149-5, *Public transport - Road vehicle scheduling and control systems - Part 5: CANopen cabling specifications.*

EN 50325-4, *Industrial communication subsystem based on ISO 11898 (CAN) for controller-device interfaces – Part 4: CANopen*

ENV 12896, *Road transport and traffic telematics - Public transport - Reference data model.*

ISO 11898-1, *Road vehicles - Controller area network (CAN) – Part 1: Data link layer and physical signalling.*

ISO 11992-3, *Road vehicles - Interchange of digital information on electrical connections between towing and towed vehicles - Part 3: Application layer for equipment other than braking and running gear.*

ISO 16844-7, *Road vehicles - Tachograph systems - Part 7: Parameters.*

ISO/IEC 646, *Information technology - ISO 7-bit coded character set for information interchange.*

ISO/IEC 8859-1, *Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1.*

ISO/IEC 8859-2, *Information technology - 8-bit single-byte coded graphic character sets - Part 2: Latin alphabet No. 2.*

ISO/IEC 8859-15, *Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin alphabet No. 9.*

3 Terms and definitions

For the purposes of this Technical Specification, the terms and definitions given in ENV 12896 apply.

3.1 Identifiers and numbers

3.1.1 Vehicle related identifiers and numbers

The vehicle ID is assigned uniquely by the system designer to the vehicle. Usually it refers to the vehicle ID text object (611C_n) containing the number given inside of the main computer or the number is coded by a fixed connector at the main computer (see Figure 1: x).

The body ID assigned by the system designer refers to the body ID text object (611D_n) containing the readable identification on the vehicle body. Usually this text is printed on the vehicle body (see Figure 1: y).

The radio ID assigned by the system designer refers to the radio ID text object (611E_n) containing the textual radio address of the bus. This address is necessary for selective calls to this bus (see Figure 1: z).

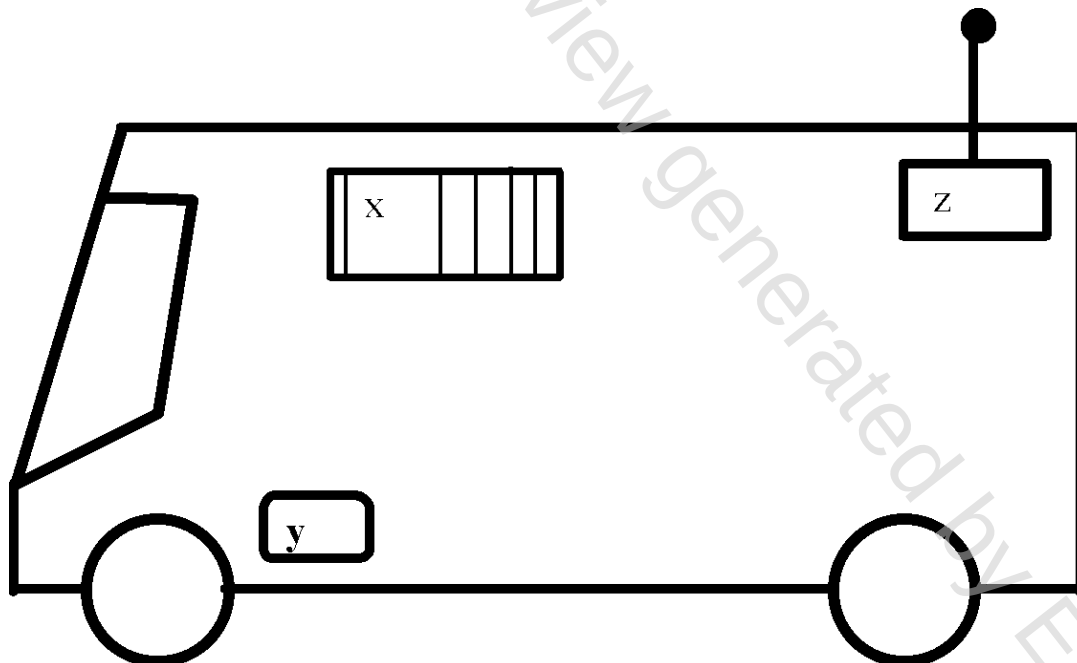


Figure 1 — Vehicle related identifiers and numbers

3.1.2 Vehicle operation identifiers and numbers

The garage ID assigned by the system designer refers to the garage ID text object (611F_n) containing the textual description of the depot or garage, where a vehicle is going to be parked during the night (see Figure 2).