PD CLC/TS 50459-2:2015

BSI Standards Publication

Railway applications — Communication, signalling and processing systems — European Rail Traffic Management System — Driver-Machine Interface

Part 2: Ergonomic arrangements of GSM-R information

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National foreword

This Published Document is the UK implementation of CLC/TS 50459-2:2015. It supersedes DD CLC/TS 50459-2:2005 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee GEL/9, Railway Electrotechnical Applications, to Subcommittee GEL/9/1, Railway Electrotechnical Applications - Signalling and communications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Railway applications - Communication, signalling and processing systems - European Rail Traffic Management System - Driver-Machine Interface - Part 2: Ergonomic arrangements of GSM-R information

Applications ferroviaires - Systèmes de signalisation, de télécommunications et de traitement - Système européen de gestion du trafic ferroviaire - Interface de conduite - Partie 2: Aménagement ergonomique des informations GSM-R

Bahnanwendungen - Telekommunikationstechnik, Signaltechnik und Datenverarbeitungssysteme - Europäisches Leitsystem für den Schienenverkehr - Mensch-Maschine Schnittstelle - Teil 2: Ergonomische Anordnung der GSM-R Informationen

This Technical Specification was approved by CENELEC on 2015-10-26.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (CLC/TS 50459-2:2015) has been prepared by CLC/SC 9XA “Communication, signalling and processing systems”, of Technical Committee CLC/TC 9X “Electrical and electronic applications for railways”.

This document supersedes CLC/TS 50459-2:2005.

CLC/TS 50459-2:2015 includes the following significant technical changes with respect to CLC/TS 50459-2:2005:

- update general principles for the presentation of ERTMS/ETCS/GSM-R information correlated with ERA document ERA_ERTMS_015560.
- update ergonomic arrangements with EN 16186 series.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

CLC/TS 50459 series consists of the following parts under the general title *Railway applications — Communication, signalling and processing systems — European Rail Traffic Management System — Driver-Machine Interface:*

- *Part 1: General principles for the presentation of ERTMS/ETCS/GSM-R information*;
- *Part 2: Ergonomic arrangements of GSM-R information* [the present document];
- *Part 3: Ergonomic arrangements of non ETCS information*.

Introduction

This document should be read in conjunction with ERA_ERTMS_015560, *ETCS Driver Machine Interface*, and the EN 16186 series, *Railway applications — Driver's cab*.

CLC/TS 50459 series contains the ergonomic arrangements of information on the ERTMS/DMI Display (CCD and TRD). Most items are illustrated with an example.

The reasons for defining the ergonomics of the DMI are as follows:

— achieving harmonized and coherent presentation for ERTMS/ETCS and NTC information;

— defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications;

— to reduce the risk of incorrect operation by a driver;

— facilitating train operation with a unified ergonomics, hence reducing the cost of driver training;

— better understanding of the tasks to be performed;

— increasing speed and accuracy of driver actions.

1 Scope

This Technical Specification describes from an ergonomic point of view how GSM-R information shall be arranged and displayed. More specifically it covers information that is out of the scope of ERA document ERA_ERTMS_015560. This Technical Specification describes more ergonomic details than currently provided by the GSM-R specifications.

This Technical Specification defines the ergonomics for the Driver-Machine Interface (DMI) for the stand alone ERTMS/GSM-R Voice Radio Systems.

2 Normative references

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

EN 16186-1, *Railway applications — Driver's cab — Part 1: Anthropometric data and visibility*

prEN 16186-2, *Railway applications — Driver's cab — Part 2: Integration of displays, controls and indicators*

prEN 16186-3:2014, *Railway applications — Driver's cab — Part 3: Design of displays*

CLC/TS 50459-1:2015, *Railways applications — Communication, signalling and processing systems — European Rail Traffic Management System — Driver-Machine Interface — Part 1: General principles for the presentation of ERTMS/ETCS/GSM-R information*

UIC 612-01, *Display System in driver cabs (DDS) — General Requirements, Set Up and Technical Specifications*, version 1 July 2011

UIC 612-04, *Display System in Driver's Cabs (DDS) — Train Radio Display (TRD)*, version 1 September 2012

UIC ERTMS/GSM-R OPERATORS GROUP Document No. O-2680, V1.0, dated 03/02/2005

UIC Project EIRENE, *Functional Requirements Specification*, Version 7.3.0, UIC CODE 950, 8 March 2012

UIC Project EIRENE, *System Requirements Specification*, Version 15.3.0, UIC CODE 951, 8 March 2012

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in CLC/TS 50459-1:2015 and the following apply.

3.1.1
auto-answered
according to EIRENE, automatically answered from a mobile station to a call if the incoming call is of or exceeds a defined priority level

3.1.2
broadcast call
call made to all members of a pre-defined group within a local geographical area

Note 1 to entry: Only the initiator of the call may talk, with all other group members listening only.