BSI Standards Publication

Electronic fee collection - Personalization of on-board equipment (OBE) - Part 1: Framework (ISO/TS 21719-1:2018)

Part 1: Framework

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National foreword

This Published Document is the UK implementation of CEN ISO/TS 21719-1:2018. It is identical to ISO/TS 21719-1:2018.

The UK participation in its preparation was entrusted to Technical Committee EPL/278, Intelligent transport systems.

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

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Published by BSI Standards Limited 2018

ISBN 978 0 580 98137 1

ICS 03.220.20; 35.240.60

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 March 2018.

Amendments/corrigenda issued since publication

Date	Text affected

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN ISO/TS 21719-1

February 2018

ICS 03.220.20; 35.240.60

English Version

Electronic fee collection - Personalization of on-board equipment (OBE) - Part 1: Framework (ISO/TS 21719-1:2018)

Perception de télépéage - Personnalisation des équipements embarqués - Partie 1: Cadre (ISO/TS 21719-1:2018)

Elektronische Gebührenerhebung - Personalisierung von Onboard-Einrichtungen - Teil 1: Grundstruktur (ISO/TS 21719-1:2018)

This Technical Specification (CEN/TS) was approved by CEN on 2 February 2018 for provisional application.

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Ref. No. CEN ISO/TS 21719-1:2018: E

European foreword

This document (CEN ISO/TS 21719-1:2018) has been prepared by Technical Committee ISO/TC 204 "Intelligent transport systems" in collaboration with Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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Endorsement notice

The text of ISO/TS 21719-1:2018 has been approved by CEN as CEN ISO/TS 21719-1:2018 without any modification.

Contents

Page

Foreword

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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

A list of all parts in the ISO 21719 series can be found on the ISO website.

Introduction

On-board equipment (OBE) is an in-vehicle device that is able to contain one or more application instances in order to support different intelligent transportation system (ITS) implementations such as electronic fee collection (EFC). Examples of EFC applications are road toll collection/road charging, localization augmentation (LAC) or compliance checking (CCC).

To assign the EFC application in the OBE to a certain user and/or vehicle, personalization should be performed. This means that unique user and vehicle related data, needs to be transferred to the OBE.

The CEN/TR 16152 already assessed many aspects of the personalization process and it also defined the overall personalization assets, i.e. application data, application keys and vehicle data.

Different communication media may be used for transferring the personalization assets to the OBE; but for all media, common procedures may be applied such as an overall message exchange framework and necessary security functionality in order to ensure data protection and integrity.

By standardizing the personalization procedure, compatibility of personalization equipment is supported, and the entity responsible for the personalization, e.g. a toll service provider, will be able to outsource parts of, or a complete, personalization to a third party, another service provider or a personalization agent.

This document defines common functionality for personalization that is independent of the communication media and personalization equipment (PE) used, while the subsequent parts define in detail how the functions are realized on different defined communication media and interfaces.

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Electronic fee collection - Personalization of on-board equipment (OBE) - Part 1: Framework (ISO/TS 21719-1:2018) —

Part 1:
Framework

1 Scope

This document describes:

— an overall description of the EFC personalization process;

— a description of EFC functionality that can be used for personalization.

The personalization process takes place within the domain of the entity that is responsible for the application in the OBE.

The scope of the EFC functionality is limited to the interface between the personalization equipment (PE) and OBE as shown in Figure 1. It is out of the scope of this document to define whether the personalization functionality resides completely in the PE or whether this functionality instead resides in a central system and where the PE is more or less "transparent".

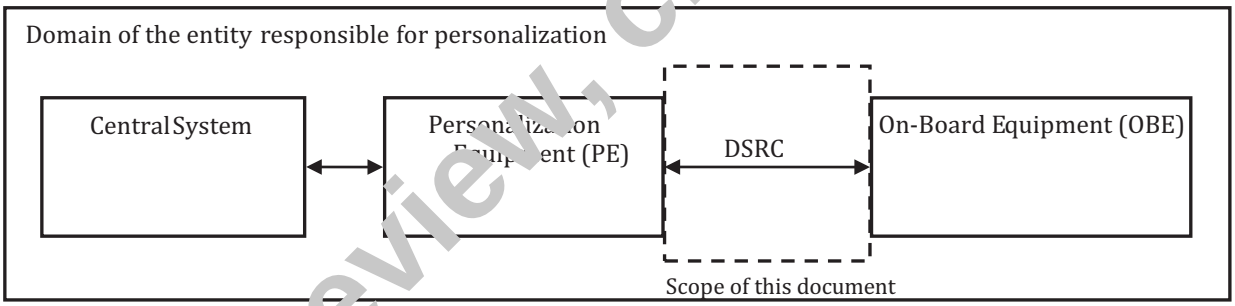

Figure 1 – Scope of this document (box delimited by the dotted line)

It is outside the scope of this document to define the following:

— exact application command or message structures for the EFC personalization functionality (these are dependent on the communication media and described in subsequent parts of the ISO/TS 21719 series);

— conformance procedures and test specification (this may be provided in a by separate set of standards that are referred to in the subsequent parts of the ISO/TS 21719 series);

— setting-up of operating organizations (e.g. Toll Service Provider, personalization agent, trusted third party, etc.);

— legal issues.

NOTE Some of the above issues are subject to separate standards prepared by CEN/TC 278, ISO/TC 204 or ETSI ERM.