

Intelligent transport systems - After-theft systems for the recovery of stolen vehicles - Part 4: Interface and system requirements in terms of long range communication system

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NATIONAL FOREWORD

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English Version

Intelligent transport systems - After-theft systems for the recovery of stolen vehicles - Part 4: Interface and system requirements in terms of long range communication system

Systèmes de transport intelligents - Systèmes intervenant après un vol pour la récupération des véhicules - Partie 4: Spécifications d'interface et de système pour les communications à longue portée

Intelligente Transportsysteme - Systeme für das Wiederfinden gestohlener Fahrzeuge - Teil 4: Schnittstellen- und Systemanforderungen für Weitbereichskommunikationssysteme

This European Standard was approved by CEN on 26 April 2013.

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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 15213-4:2013) has been prepared by Technical Committee CEN/TC 278 "Road Transport and Traffic Telematics", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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

This document supersedes CEN/TS 15213-4:2006.

It is derived from a suite of CEN Technical Specifications CEN/TS 15213-1 to -6 inclusive dealing with the tracking and recovery of stolen vehicles. Parts 1 to 5 inclusive have been upgraded to EN status without change. CEN/TS 15213-6:2011 remains a valid Technical Specification as of the date of this publication and will be considered for EN status in due course. All these documents remain related and should be read in conjunction according to the type of technology, product or service being considered.

EN 15213 consists of the following parts:

- EN 15213-1, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 1: Reference architecture and terminology*;
- EN 15213-2, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 2: Common status message elements*;
- EN 15213-3, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 3: Interface and system requirements in terms of short range communication system*;
- EN 15213-4, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 4: Interface and system requirements in terms of long range communication system* (the present document);
- EN 15213-5, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 5: Messaging interface*;
- CEN/TS 15213-6, *Road transport and traffic telematics — After-theft services for the recovery of stolen vehicles — Part 6: Test procedures*¹⁾.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1) Part 6 awaits final evaluation and ratification as EN and until such time remains a valid part of this EN as CEN/TS 15213-6:2011.

Introduction

This European Standard was developed by CEN/TC 278 "Road transport and traffic telematics", Working Group 14 (WG 14) on the subject of After Theft Systems for Vehicle Recovery (ATSVR).

WG 14 comprised representatives and experts from police, insurance associations (CEA), car manufacturers, transport associations, vehicle rental associations and ATSVR system and product providers. The work was also in cooperation with Europol and the European Police Cooperation Working Group (EPCWG).

This European Standard was developed to define an architecture within guidelines from CEN/TC 278 through which a level of interoperability can be achieved between Systems Operating Centres (SOC) and Law Enforcement Agencies (LEA), both nationally and internationally.

This will provide minimum standards of information and assurance to users as to the functionality of systems, thereby enabling the recovery of vehicles, detection of offenders and a reduction in crime.

This European Standard refers to the potential development of systems to enable law enforcement agencies to remotely slow and/or stop the engines of stolen vehicles. This situation remains and further information is available in 2012 CEN publication N2643 Feasibility Report on Remote Slow and Stop Technology, available from CEN/TC 278.

This document should be read in conjunction with EN 15213-1 which provides the preliminary framework for ATSVR concepts.

1 Scope

This European Standard specifies the characteristics required to operate the Long Range ATSVR Architecture.

An ATSVR consists of various elements that communicate and interact through a range of interfaces in accordance with standard procedures and protocols in order to facilitate the recovery of stolen vehicles. These processes may involve a human operator.

ATSVR elements include an OBE installed in the vehicles, a range of Detecting Equipment and one or more System Operating Centres. One or more supporting Infrastructure Networks provide communications to support the ATSVR. The ATSVR location function may also include one or more supporting Position Reference Sources.

The LR systems use an interface that allows the Detection Equipment to operate some ATSVR Functions at distances greater than the direct line of sight. These LR systems are generally operated with ATSVR Location Functions using long-range communications.

This European Standard permits existing proprietary systems to operate using these interface specifications at ATSVR application level.

The main subject areas are:

- a) definition of classes and categories;
- b) interoperability and compatibility of systems at:
 - 1) functional level;
 - 2) information level;
 - 3) performance level;
- c) identification of communications supporting infrastructures;
- d) specification of compatible interfaces for ATSVR applications;
- e) restriction of specifications to:
 - 1) application level;
 - 2) operating level;
 - 3) user level.

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 15213-1:2013, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 1: Reference architecture and terminology*

EN 15213-3:2013, *Intelligent transport systems — After-theft systems for the recovery of stolen vehicles — Part 3: Interface and system requirements in terms of short range communication system*

ISO/TS 21609, *Road vehicles — (EMC) guidelines for installation of aftermarket radio frequency transmitting equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15213-1:2013 and EN 15213-3:2013 apply.

4 Symbols and abbreviations

| | |
|--------|-------------------------------------|
| DE | Detection Equipment |
| LEALaw | Enforcement Agency (see EN 15213-1) |
| LR | Long Range |
| OBE | On Board Equipment |
| SOC | System Operating Centre |
| SR | Short Range |

5 Requirements for Long Range Operations

5.1 LR ATSVR Architecture

An LR ATSVR consists of various equipment elements that communicate and interact through communication network interfaces in accordance with standard procedures and protocols to facilitate the recovery of a stolen vehicle. These processes may involve a human operator.

ATSVR elements include an OBE installed in the vehicle, a range of Detecting Equipment and one or more SOC's. One or more supporting communications network interfaces facilitates the interactions that support the various ATSVR functions. The ATSVR location function may also include one or more supporting Position Reference Sources.

5.2 The LR ATSVR Process

The process begins with the theft of the vehicle. Following theft or suspected theft, the first possible function is to indicate that the theft has occurred. Following this, the status of the target vehicle, i.e., whether the target vehicle has been stolen or not, shall be confirmed by the user or by other appropriate personnel; this status shall then be acknowledged by an LEA. This then becomes a Registered Stolen Vehicle.

The vehicle should then be located by the ATSVR, and if moving, tracked or homed onto by the system in order to facilitate LEA or ATSVR service personnel to close range with the target vehicle. By closing range with the target vehicle, they will more easily be able to recognise the vehicle. Once recognised, the target vehicle shall be accurately discriminated as the target vehicle from other surrounding vehicles.

This process facilitates the selection of the target vehicle for closer examination by LEA or ATSVR personnel in order to confirm the identity of the target vehicle as the stolen vehicle. The process of establishing identity may require an additional query and response through ATSVR databases.

This process can, under controlled circumstances, be assisted by the degradation of the capabilities of the target vehicle.