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Vägtrafikinformatik – Spårning av stulna fordon – Del 1: Referensarkitektur och terminologi

Intelligent transport systems – After-theft systems for the recovery of stolen vehicles – Part 1: Reference architecture and terminology

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Denna standard ersätter SIS-CEN/TS 15213-1:2006, utgåva 1.

The European Standard EN 15213-1:2013 has the status of a Swedish Standard. This document contains the official version of EN 15213-1:2013.

This standard supersedes SIS-CEN/TS 15213-1:2006, edition 1.

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EUROPEAN STANDARD

EN 15213-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2013

ICS 01.040.35; 35.240.60

Supersedes CEN/TS 15213-1:2005

English Version

Intelligent transport systems - After-theft systems for the recovery of stolen vehicles - Part 1: Reference architecture and terminology

Systèmes de transport intelligents - Systèmes intervenant après un vol pour la récupération des véhicules - Partie 1 : Architecture de référence et terminologie

Intelligente Transportsysteme - Systeme für das Wiederfinden gestohlener Fahrzeuge - Teil 1: Referenzarchitektur und Begriffe

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

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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Foreword

This document (EN 15213-1:2013) 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 15213-1:2005.

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* (the present document);
- 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*;
- 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.

The other parts of EN 15213 should be read in conjunction with this document that distils the architecture and terminology profile generated by the internal technical reports of CEN/TC 278.

1 Scope

For many years, consumers, law enforcement agencies and insurers have been confronted with an ever-increasing number of vehicle thefts, both genuine thefts and insurance frauds, as well as the growing problem of increasing violence and threats against vehicle drivers.

Manufacturers have and will continue to introduce after-theft systems that will enable the police to recover stolen vehicles. Different techniques are being used for that purpose. This document refers to them by the generic name of After Theft Systems for Vehicle Recovery (ATSVR).

Standards for Automatic Vehicle Identification (AVI) and Automatic Equipment Identification (AEI) are being developed by CEN/TC 278/WG 12 in parallel with EN ISO 14814. This ATSVR standard does not prejudice that work and does not seek to establish parameters for future AVI/AEI standards. DSRC and AVI standards are seen as basic technology blocks for types of short-range ATSVR systems.

Certain specialised terms and definitions have been used in writing the ATSVR standards. This preliminary document aims to provide the preliminary framework of ATSVR concepts and definitions for the purpose of following ones. It will therefore:

- define the concepts and global architecture models for ATSVR and the appropriate terminology;
- identify the various elements that may comprise an ATSVR.

The events and associated information that are relevant to the situation prior to the registration of the theft are relevant to the total process, but may be subject to the laws of individual countries. Such events and associated information may be described in the standards to give clarity to the technical processes identified, which obviously does not presume on the prevailing legal conditions.

2 Normative references

Not applicable.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 General definitions

3.1.1

ATSVR

After Theft System for Vehicle Recovery

system that comprises various technical elements that communicate and interact through various interfaces in accordance with standard procedures and transmission protocols in order to facilitate the recovery of a Registered Stolen Vehicle

Note 1 to entry: An ATSVR necessarily includes various human elements. For clarity, this document will identify interactions and interfaces that exist amongst the equipment and human elements operating within the system.

3.1.2

ATSVR user

individual, group or organisation that directly uses or interacts with an ATSVR

Note 1 to entry: The main users could be: Law Enforcement Agencies, Insurers, Car Manufacturers, System Service Providers and Vehicle Service Providers.

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3.1.3

ATSVR detection equipment user

personnel who operate the *ATSVR Detection Equipment*

3.1.4

ATSVR information user

personnel who use the ATSVR data and information

3.1.5

ATSVR service provider

organisation that provides ATSVR Services for ATSVR Users

Note 1 to entry: An ATSVR Service Provider can operate all or part of the functions of an ATSVR. It will usually be distinct from a Law Enforcement Agency. It may also be known as a Private Security Company or ATSVR operator.

3.1.6

ATSVR equipment

equipment that either, individually or in combination with other equipment, performs one or more functions of an ATSVR or facilitates interfaces between the various elements of an ATSVR

3.1.7

ATSVR on-board equipment

OBE

equipment which is installed in or on the vehicle whose primary purpose is to allow that vehicle to be recovered in the event of theft and which may also indicate theft and record activity relevant to that detection

3.1.8

ATSVR detection equipment

DE

equipment which is used to perform various functions of an ATSVR and which may be stationary, portable or mobile

3.1.9

ATSVR system operating centre

SOC

System Operating Centre which functions as a control and management centre for an ATSVR

Note 1 to entry: It may, for example, be a commercial bureau, a government facility or law enforcement agency office. An SOC is distinct from the communications infrastructure, detection equipment and On-Board Equipment.

3.1.10

law enforcement agency

LEA

Agency or Organisation approved or appointed to have jurisdiction in a territory over the recovery of stolen vehicles

Note 1 to entry: It will usually refer to an official authority such as the Police Force or Customs Service.

3.1.11

ATSVR human interactions

human interactions are required to link different stages of the process, these human interactions obviously being outside the scope of standards

Note 1 to entry: Recovery process cannot be fully automatic. See Figure 3 — Human interactions for the ATSVR model.

3.1.12

ATSVR “human machine interface”

interaction mechanism between the user and the equipment, including the set of inputs, outputs and dialogue procedures (that concern all display, sound signals and command user)

Note 1 to entry: As technical supports of the Human Interface, the HMIs are subject to standardisation.

3.1.13

vehicle operators

individuals legally operating or driving a vehicle, not necessarily the vehicle's legal owner or registered keeper

3.1.14

unauthorised vehicle operators

individuals operating or driving a vehicle who have NOT been authorised by the registered owner or authorised agent of the vehicle to operate or drive the vehicle

Note 1 to entry: Individuals whose legal authority to use the vehicle has been withdrawn.

3.1.15

vehicles

wheeled or tracked conveyances including cars, motorcycles, trucks, trolley-buses, trailers, heavy construction vehicles and agricultural plant

3.1.16

target vehicle

registered stolen vehicle fitted with ATSVR OBE that is being sought

3.1.17

registered stolen vehicle

vehicle fitted with ATSVR OBE that has been reported as stolen or being used by an Unauthorised Vehicle Operator to a Law Enforcement Agency by the Vehicle Owner, by an Authorised Vehicle Operator, or by an ATSVR Service and that report having been accepted by the LEA caused the LEA to register the vehicle as stolen or as being used by an Unauthorised Vehicle Operator

Note 1 to entry: This is the official theft registration.

3.1.18

detected vehicle

Registered Stolen Vehicle fitted with an ATSVR OBE that has been detected by an item of DE

3.1.19

telecom operator

provider of telecommunications services not dedicated exclusively for an ATSVR System, but used in many application areas (e.g. Network Operator of a GSM, RDS, communication satellite, optical cable, PSTN network)

3.2 Basic ATSVR Functions

There are three basic ATSVR functions of **detection**, **location** and **identification** of a Registered Stolen Vehicle.

3.2.1

detection function

function to detect automatically or semi-automatically the location of a Registered Stolen Vehicle

Note 1 to Entry: This may be done by Signaling or by Consulting.

Note 2 to Entry: Detection by Signalling is where the OBE has been activated by a signal from an external source. This activation may come from a mobile or stationary source, which may be local to the vehicle (Short-Range) or at a distance from the vehicle (Long-Range). Once activated the OBE will transmit a signal that is capable of being picked up by ATSVR Detection Equipment located locally to the vehicle or at a distance from the vehicle. The transmitted signal may contain other relevant information.

Note 3 to Entry: Detection by Consulting is where an external item of Detection Equipment interrogates the OBE and the OBE responds by transmitting data to the DE. The DE then compares the received data with a database of Registered Stolen Vehicles, a data match confirms that a Registered Stolen Vehicle is present and further action can take place.