

STN	Inteligentné systémy (ITS). Komunikácia vozidiel. Základný súbor aplikácií.	STN ETSI EN 302 895 V1.1.1 87 2898
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Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/15

Obsahuje: ETSI EN 302 895 V1.1.1:2014

120092

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2015
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy
rozmnžovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

ETSI EN 302 895 V1.1.1 (2014-09)



**Intelligent Transport Systems (ITS);
Vehicular Communications;
Basic Set of Applications;
Local Dynamic Map (LDM)**

Reference

DEN/ITS-0010005

Keywords

application, ITS, management, user

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Contents

Intellectual Property Rights	5
Foreword.....	5
Modal verbs terminology.....	5
Introduction	5
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	7
3 Definitions and abbreviations.....	8
3.1 Definitions.....	8
3.2 Abbreviations	8
4 General description of a LDM.....	9
4.1 Functionality provided by the LDM.....	9
5 LDM functional specification	9
5.1 LDM requirements	9
5.1.1 LDM functional requirements.....	9
5.1.2 LDM other requirements	10
5.2 The LDM within the ITS-S communication architecture.....	10
5.3 LDM functional architecture	11
5.3.1 Function FN.LDM.1 - LDM Service	11
5.3.2 Function FN.LDM.2 - LDM Maintenance.....	12
5.4 Interfaces of the LDM	12
5.4.1 Interface IF.LDM.1 - management layer	12
5.4.2 Interface IF.LDM.2 - security layer	13
5.4.3 Interface IF.LDM.3 - LDM Data Providers.....	13
5.4.4 Interface IF.LDM.4 - LDM Data Consumers	13
6 LDM Interfaces	14
6.1 Interface IF.LDM.2 to the security layer	14
6.1.1 Authorization	14
6.1.1.1 Authorize messages.....	14
6.1.2 Revocation	15
6.1.2.1 RevokeAuthorization messages	15
6.2 Interface IF.LDM.3 to LDM Data Providers.....	16
6.2.1 Registration.....	16
6.2.1.1 RegisterDataProvider messages	16
6.2.2 Deregistration	17
6.2.2.1 DeregisterDataProvider messages.....	17
6.2.2.2 RevokeDataProviderRegistration message	17
6.2.3 Maintenance of Provider data	18
6.2.3.1 AddProviderdata messages	18
6.2.3.2 UpdateProviderdata messages.....	19
6.2.3.3 DeleteProviderdata messages.....	19
6.3 Interface IF.LDM.4 to LDM Data Consumers	20
6.3.1 Registration.....	20
6.3.1.1 RegisterDataConsumer messages	20
6.3.2 Deregistration	21
6.3.2.1 DeregisterDataConsumer messages	21
6.3.2.2 RevokeDataConsumerRegistration message.....	22
6.3.3 Data Request.....	22
6.3.3.1 RequestDataobjects messages	22
6.3.4 Subscription	23

6.3.4.1	SubscribeDataConsumer messages	23
6.3.5	Cancel subscription.....	25
6.3.5.1	UnsubscribeDataConsumer messages	25
Annex A (normative):	Data request filtering.....	26
A.1	Minimal syntax of data request filtering	26
A.1.1	Filter	26
A.1.2	Filter Statement	26
A.1.2.1	Comparison Operator.....	27
A.1.2.2	Reference Value.....	27
A.1.3	Logical operators for combining Filter Statements	27
A.2	Ordering Data Request Results	28
Annex B (normative):	ITS LDM Interface messages specified in ASN.1	29
Annex C (informative):	Bibliography.....	35
History		36

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Intelligent Transport Systems (ITS).

The present document is a single part deliverable.

National transposition dates	
Date of adoption of this EN:	22 September 2014
Date of latest announcement of this EN (doa):	31 December 2014
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2015
Date of withdrawal of any conflicting National Standard (dow):	30 June 2016

Modal verbs terminology

In the present document **"shall"**, **"shall not"**, **"should"**, **"should not"**, **"may"**, **"may not"**, **"need"**, **"need not"**, **"will"**, **"will not"**, **"can"** and **"cannot"** are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

In cooperative Intelligent Transport Systems (ITS), the Local Dynamic Map (LDM) is a key facility supporting various ITS applications by maintaining the information on objects influencing or being part of ITS. The Local Dynamic Map therefore is relevant to the development of technical standards and specifications in order to ensure deployment and interoperability of cooperative systems and services described in the EC's ICT Standardization Work Programme [i.7].

The LDM is a facility within the ITS station facilities layer as defined in the ITS communication architecture given in EN 302 665 [i.1]. Cooperative Awareness Messages (CAMs) as defined in EN 302 637-2 [4] and Decentralized Environmental Notification Messages (DENMs) as defined in EN 302 637-3 [5] are important sources of data for the LDM.

Moreover the LDM will support the Basic Set of Applications (BSA) outlined in TS 102 637-1 [i.2] by providing plausible authorized, area related information in a time relevant manner. The BSA provides the application specific requirements for the LDM.

The following applications from the BSA are considered:

- Driving assistance - Cooperative awareness.
- Driving assistance - Road Hazard Signalling (see TS 101 539-1 [i.3]).
- Speed management.
- Cooperative navigation Location based services.
- Community services.
- ITS station life cycle management.

1 Scope

The present document defines functional behaviour associated with a Local Dynamic Map (LDM) for usage in an ITS station unit (ITS-SU). It specifies functions and interfaces supported by a LDM. These functions and interfaces provide secure access to the LDM to manage LDM data objects stored in a LDM. It defines LDM data objects for safety-related and Vehicle to Vehicle (V2V)-related applications.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 102 860 (V1.1.1) (2011-05): "Intelligent Transport Systems (ITS); Classification and management of ITS application objects".
- [2] ISO/IEC 8824-1:2008: "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [3] ETSI TS 102 894-2: "Intelligent Transport Systems (ITS); Users and applications requirements; Part 2: Applications and facilities layer common data dictionary".
- [4] ETSI EN 302 637-2 (V1.3.1) (2014-09): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service".
- [5] ETSI EN 302 637-3 (V1.2.1) (2014-09): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI EN 302 665 (V1.1.1) (2010-09): "Intelligent Transport Systems (ITS); Communications Architecture".
- [i.2] ETSI TS 102 637-1 (V1.1.1) (2010-09): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 1: Functional Requirements".
- [i.3] ETSI TS 101 539-1 (V1.1.1) (2013-08): "Intelligent Transport Systems (ITS); V2X Applications; Part 1: Road Hazard Signalling (RHS) application requirements specification".
- [i.4] ETSI TS 102 723-5 (V1.1.1) (2012-11): "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 5: Interface between management entity and facilities layer".

- [i.5] ETSI TR 102 863 (V1.1.1) (2011-06): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Local Dynamic Map (LDM); Rationale for and guidance on standardization".
- [i.6] ISO/IEC 19505-2:2012(E): "Information technology - Object Management Group Unified Modeling Language (OMG UML), Superstructure".
- [i.7] European Commission: "2010-2013 ICT Standardisation Work Programme for industrial innovation", 2nd update - 2012.

NOTE: Available at: http://ec.europa.eu/enterprise/sectors/ict/files/ict-policies/2010-2013_ict_standardisation_work_programme_2nd_update_en.pdf.

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