

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Symbols and abbreviated terms
5	Architectural environment
5.1	Local Dynamic Map
5.2	LDM in an ITS-S
5.3	LDM in an ITS-SU
5.4	LDM related processes
5.4.1	Synchronization of LDMs
5.4.2	Archiving of LDM Data Objects
5.5	LDM for road safety and vehicle-to-vehicle applications
5.6	Security perspective
5.6.1	Authorised access to LDM
5.6.2	Initialisation and installation of applications to the BSMD
5.6.3	Privacy
5.7	An LDM versus other similar functionalities in an ITS-SU
6	Functionality
6.1	Terms and conventions
6.2	Structure of an LDM
6.3	LDM Data Storage
6.4	LDM services
6.4.1	Registration, deregistration, and revocation of ITS-S application processes
6.4.2	Security checking in access requests
6.4.3	Access request management
6.4.3.1	Overview
6.4.3.2	Add LDM data record
6.4.3.3	Update LDM data record
6.4.3.4	Delete LDM data record
6.4.3.5	Query LDM-DO
6.4.3.6	Subscribe for updates of LDM-DOs
6.4.3.7	Unsubscribe for updates of LDM-DOs
6.4.3.8	Notify updates of LDM-DOs
6.4.3.9	Second level filtering
6.5	LDM maintenance
6.5.1	LDM Area of Maintenance
6.5.2	Outdated data management
6.6	LDM knowledge base
6.6.1	Metadata
6.6.2	Utility functions
6.7	Interfaces
6.7.1	Types of interfaces
6.7.2	Parameters of interface functions
6.7.3	LDM application management interface
6.7.3.1	6.7.3.1 Register function
6.7.3.2	6.7.3.2 Deregister function

- 6.7.3.3 Revoke ITS-S application process notify function
- 6.7.4 LDM data interface
- 6.7.4.1 Add LDM Data Record function
- 6.7.4.2 Update LDM Data Record function
- 6.7.4.3 Delete LDM Data Record function
- 6.7.4.4 Subscribe function
- 6.7.4.5 Unsubscribe function
- 6.7.4.6 Query function
- 6.7.4.7 Notification function
- 6.7.5 Security interface
- 6.7.5.1 Check authorization function
- 6.7.5.2 Revoke authorization function
- 6.7.6 LDM management interface
- 6.7.6.1 LDM registration at ITS-S management entity
- 6.7.7 Service access points

7 Procedures

- 7.1 LDM services
 - 7.1.1 Registration, deregistration, and revocation of ITS-S application processes
 - 7.1.2 Security checking in access requests
 - 7.1.3 Access request management
 - 7.1.3.1 Authorization and plausibility checking
 - 7.1.3.2 Add LDM Data Record
 - 7.1.3.3 Update LDM Data Record
 - 7.1.3.4 Delete LDM Data Record
 - 7.1.3.5 Query LDM-DO
 - 7.1.3.6 Subscribe for updates of LDM-DOs
 - 7.1.3.7 Unsubscribe for updates of LDM-DOs
 - 7.1.3.8 Notify updates of LDM-DOs
 - 7.1.4 Second level filtering
- 7.2 LDM maintenance
 - 7.2.1 Area management
 - 7.2.2 Outdated data removal
- 7.3 LDM knowledge data base
- 7.4 Interfaces
- 7.5 LDM management
 - 7.5.1 Registration of LDM at ITS-S management entity
 - 7.5.2 Multiple ITS-SCUs

Annex A (normative) ASN.1 modules

- A.1 Overview
- A.2 Module CITSIdm
- A.3 Definitions to be added in ISO 24102-3
 - A.3.1 General
 - A.3.2 MF-Command
 - A.3.3 MF-Request
 - A.3.4 FA-SAP function
 - A.3.5 SF-Command
 - A.3.6 SF-Request

Annex B (normative) LDM Data Dictionary

Annex C (informative) Examples of LDM-DOs

- C.1 Introduction
- C.2 Example of road-works data objects
 - C.2.1 DATEX II
 - C.2.2 TPEG - TEC
 - C.2.3 DENM
 - C.2.4 LDMRoadworks data object

Annex D (informative) Location-Referencing

- D.1 Introduction
- D.2 Location referencing
- D.3 Geographic information based methods

- D.3.1 Spatial referencing by coordinates
- D.3.2 Spatial referencing by geography identifiers
- D.3.3 Linear referencing
- D.4 Location referencing for geographic databases
- D.4.1 General requirements and conceptual model
- D.4.2 Pre-coded location references (pre-coded profile)
- D.4.3 Dynamic location references (dynamic profile)
- D.5 Other location referencing approaches
- D.5.1 ILOC
- D.5.2 OpenLR
- D.5.3 MAP and TOPO

Annex E (informative) Time-Referencing

Annex F (normative) Implementation Conformance Statement proforma

- F.1 Guidance for completing the ICS proforma
- F.1.1 Purposes and structure
- F.1.2 Abbreviations and conventions
- F.1.3 Instructions for completing the ICS proforma
- F.2 Identification of the Implementation
- F.2.1 Date of the statement
- F.2.2 Identification of IUT
- F.2.3 Identification of SUT
- F.2.4 Product supplier
- F.2.5 Client
- F.2.6 ICS contact person
- F.3 Identification of the implementation
- F.4 Global statement of conformance
- F.5 Detailed conformance statements
- F.5.1 Design choices
- F.5.2 Procedures related to ITS-S application processes
- F.5.3 Management procedures
- F.5.4 Format and encoding
- F.5.5 LDM Data Dictionary

Page count: 70