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ISO 18750

**Intelligent transport systems —
Local dynamic map**

Systèmes de transport intelligents — Carte dynamique locale

**Second edition
2025-04**



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Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	3
5 Architectural environment	4
5.1 General.....	4
5.2 Local dynamic map.....	4
5.3 LDM in an ITS-S.....	4
5.4 LDM in an ITS-SU.....	5
5.5 LDM related processes.....	7
5.5.1 Synchronization of LDMs.....	7
5.5.2 Archiving of LDM Data Objects.....	7
5.6 LDM for road safety and vehicle-to-vehicle applications.....	7
5.7 Security perspective.....	8
5.7.1 Authorized access to LDM.....	8
5.7.2 Initialisation and installation of applications to the BSMD.....	8
5.7.3 Privacy.....	9
5.8 An LDM versus other similar functionalities in an ITS-SU.....	9
6 Functionality	9
6.1 General.....	9
6.2 Terms and conventions.....	9
6.3 Structure of an LDM.....	10
6.4 LDM Data Storage.....	12
6.5 LDM services.....	14
6.5.1 Registration, deregistration, and revocation of ITS-S application processes.....	14
6.5.2 Security checking in access requests.....	14
6.5.3 Access request management.....	14
6.6 LDM maintenance.....	17
6.6.1 LDM Area of Maintenance.....	17
6.6.2 Outdated data management.....	17
6.7 LDM knowledge base.....	17
6.7.1 Metadata.....	17
6.7.2 Utility functions.....	17
6.8 Interfaces.....	18
6.8.1 Types of interfaces.....	18
6.8.2 Parameters of interface functions.....	18
6.8.3 LDM application management interface.....	20
6.8.4 LDM data interface.....	22
6.8.5 Security interface.....	25
6.8.6 LDM management interface.....	26
6.8.7 Service access points.....	27
7 Procedures	29
7.1 General.....	29
7.2 LDM services.....	30
7.2.1 Registration, deregistration, and revocation of ITS-S application processes.....	30
7.2.2 Security checking in access requests.....	30
7.2.3 Access request management.....	30
7.2.4 Second level filtering.....	32
7.3 LDM maintenance.....	32
7.3.1 Area management.....	32

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7.5	Interfaces.....	33
7.6	LDM management.....	33
7.6.1	Registration of LDM at ITS-S management entity.....	33
7.6.2	Multiple ITS-SCUs.....	33
Annex A	(normative) ASN.1 modules.....	34
Annex B	(normative) LDM Data Dictionary.....	46
Annex C	(informative) Examples of LDM-DOs.....	48
Annex D	(informative) Location-referencing.....	55
Annex E	(informative) Time-referencing.....	59
Annex F	(normative) Implementation Conformance Statement proforma.....	60
Bibliography	67

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This second edition cancels and replaces the first edition (ISO 18750:2018), which has been technically revised.

The main changes are as follows:

- "Co-operative ITS" has been removed from the title to align with the unchanged Scope;
- the ASN.1 module has been updated to support minor version changes;
- the ASN.1 module has been aligned with the latest developments of other ASN.1 modules (this alignment does not introduce technical changes in the module);
- the references have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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An essential property of cooperative intelligent transport systems (C-ITS; see ISO/TR 17465-1) is the sharing of data between different ITS applications providing different ITS services to users. This approach replaces the traditional approach, where each application is operated in an isolated environment, referred to as a "silo-approach". The C-ITS approach enables synergies in components of an ITS station unit (e.g. sharing of communication tools), improves overall performance and reliability, and reduces overall cost. In order to protect the interests of the various ITS applications, C-ITS implements the concept of an ITS station operated as a bounded secured managed domain.

The sharing of data between applications is achieved by subscribe/publish mechanisms, where at least two mechanisms are distinguished, i.e. one allowing ITS-S application processes to subscribe to standardized messages from ITS message sets (direct forwarding upon reception of such messages in an ITS station unit), and one using a local dynamic map (LDM) as a repository of standardized data objects. Such data objects stored in an LDM are named LDM Data Objects (LDM-DOs). LDM-DOs provide self-consistent information on real objects existing at a given geo-location during a given lifetime-interval. Authorized ITS-S application processes may add LDM-DOs to an LDM, and may retrieve LDM-DOs from an LDM. Retrieval of LDM-DOs may be performed in queries and by means of subscription. A subscription will result in automatic notifications of selected LDM-DOs, either in defined time intervals, or event driven.

This document introduces the usage of LDMs, and specifies the LDM for global usage in C-ITS.

Initial implementations of LDMs were included in the EU research projects CVIS^[38] and Safespot.^[40]