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Intelligent Transport Systems (ITS);
OSI cross-layer topics;
Part 5: Interface between management entity and facilities layer

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Intelligent Transport System (ITS).

The present document is part 4 of a multi-part deliverable. Full details of the entire series can be found in part 1 [3].

Introduction

Intelligent Transport Systems (ITS) are systems to support transportation of goods and humans with information and communication technologies in order to efficiently and safely use the transport infrastructure and transport means (cars, trains, planes, ships). Complementary elements of ITS are standardized in various standardisation organisations such as ISO TC204/CEN TC278 and ETSI TC ITS.

The architecture of communications in ITS (ITSC) specified in [1] and [2] introduces the ITS station reference architecture with the internal functional blocks:

- ITS-S access layer,
- ITS-S networking & transport layer,
- ITS-S facilities layer,
- ITS-S applications,
- ITS-S management entity,
- ITS-S security entity,

and the interfaces between these blocks.

Various general addressing mechanisms, the ITS station management information base, and the details of these interfaces specified in this multi-part deliverable complement the general architecture of ITSC.

This multi-part deliverable partly acts as input to the standards making process for the various protocols of ITSC, but also is built from feed-back from this process.

1 Scope

The present document specifies the MN interface between the ITS-S management entity and the ITS-S networking & transport layer of the ITS station reference architecture.

Based on the definition of the MN interface as a service access point and the generic services and service primitives specified in [3], the present document provides detailed specifications of possible service primitives.

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 reference document (including any amendments) applies.

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2.1 Normative references

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

[1] ETSI EN 302 665: "Intelligent Transport Systems (ITS); Communications Architecture".

[2] ISO 21217: "Intelligent Transport Systems - Communications access for land mobiles (CALM) - Architecture".

[3] ETSI TS 102 723-1: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 1: Architecture and addressing schemes".

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.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [1], [2] and [3] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in [1], [2] and [3] apply.

4 Architecture

Figure 1 shows the generic architecture of the ITS-S facilities layer as specified in [1] and [2]. The MF interface presented in figure 1 is subject of the present document.

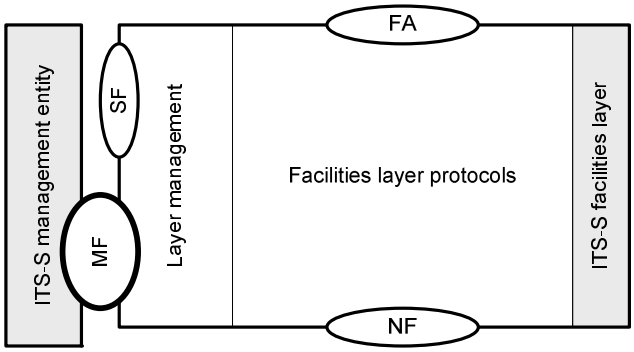

Figure 1: Architecture

5 Requirements

The MF interface is specified as a service access point (SAP) in the present document.

Compliant with the specifications in [3], the MF-SAP presented in figure 1 provides the functionality of the services

- MF-COMMAND;
- MF-REQUEST.

and the related service primitives.

Details of the related service primitives are specified in [3].

NOTE: A service access point (SAP) is not necessarily an observable and thus testable interface. The detailed technical specification of MF-SAP, its services and related service primitives at the level of ASN.1 thus in a first step is just for the purpose of clarity. The ASN.1 details may become observable and thus testable as indicated in [3].

Compliance with the functional specification is only required in case the functional behaviour is needed in a specific implementation where this functionality becomes observable and thus testable.

History

Document history		
V1.1.1	November 2012	Publication