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**Intelligent Transport Systems (ITS);**
**OSI cross-layer topics;**
**Part 11: Interface between networking and transport layer and facilities layer**

Reference
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# Contents

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# Foreword

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

The present document is part 11 of a multi-part deliverable. Full details of the entire series can be found in part 1 [i.1].

# 1 Scope

The present document specifies details of the NF interface that is exposed by the networking and transport layer to the facilities layer.

# 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.

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 EN 302 665: "Intelligent Transport Systems (ITS); Communications Architecture".

[2] ETSI TS 102 636-3: "Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 3: Network architecture".

[3] ETSI EN 302 636-5-1: "Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 5: Transport Protocols; Sub-part 1: Basic Transport Protocol".

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

# 3 Definitions and abbreviations

## 3.1 Definitions

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

## 3.2 Abbreviations

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

# 4 Architecture

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

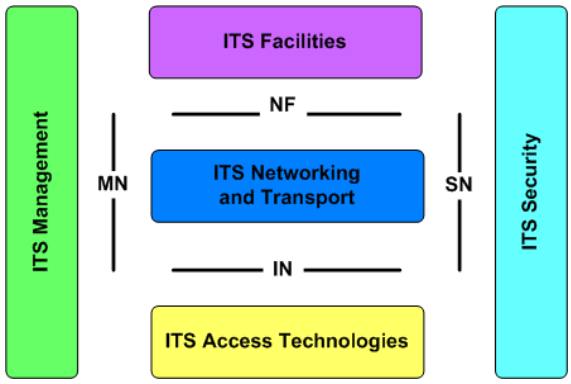


**Figure 1: Architecture**

The services of the protocols are made available through Service Access Points (SAPs) as specified in [2], i.e. geo-aware SAP $SAP_{GeoAware}$, and the UDP and TCP SAPs $SAP_{UDP}$ and $SAP_{TCP}$, which are commonly referred to as NF-SAP in [i.1]. The present document specifies $SAP_{GeoAware}$.

The present document does not exclude SAPs exposed by other protocols at the networking and transport layer.

NOTE: $SAP_{UDP}$ and $SAP_{TCP}$ are not further specified in the present document.

# 5 GeoAware SAP

The $SAP_{GeoAware}$ provides means for transmission and reception of packets. It is exposed by the Basic Transport Protocol (BTP) [3].

## 5.1 BTP-DATA.request

This service primitive requests transmission of a packet. The parameters of the service primitive shall be as specified in [3], clause A.2.

## 5.2 BTP-DATA.indication

This service primitive indicates the reception of a packet. The parameters of the service primitive shall be as specified in [3], clause A.3.

# Annex A (informative): Bibliography


- ETSI TS 102 723-2: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 2: Management information base".
- ETSI TS 102 723-3: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 3: Interface between management entity and access layer".
- ETSI TS 102 723-4: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 4: Interface between management entity and networking & transport layer".
- ETSI TS 102 723-5: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 5: Interface between management entity and facilities layer".
- ETSI TS 102 723-6: "Intelligent Transport Systems; OSI cross-layer topics; Part 6: Interface between management entity and security entity".
- ETSI TS 102 723-7: "Intelligent Transport Systems; OSI cross-layer topics; Part 7: Interface between security entity and access layer".
- ETSI TS 102 723-8: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 8: Interface between security entity and network and transport layer".
- ETSI TS 102 723-9: "Intelligent Transport Systems; OSI cross-layer topics; Part 9: Interface between security entity and facilities layer".
- ETSI TS 102 723-10: "Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 10: Interface between access layer and networking & transport layer".
- ETSI TS 102 637-1: "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 1: Functional Requirements".
- ETSI TS 102 637-2: "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service".
- ETSI TS 102 637-3: "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service".
- IETF RFC 768: "User Datagram Protocol".
- IETF RFC 793: "Transmission Control Protocol".

# History

| Document history | | |
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| V1.1.1 | November 2013 | Publication |
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