ETSI TS 103 248 V1.1.1 (2016-11)

TECHNICAL SPECIFICATION

**Intelligent Transport Systems (ITS);
GeoNetworking;
Port Numbers for the Basic Transport Protocol (BTP)**

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx

If you find errors in the present document, please send your comment to one of the following services:
https://portal.etsi.org/People/CommiteeSupportStaff.aspx

Copyright Notification

ETSI

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

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

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

Facilities layer entities that use the Basic Transport Protocol for the transport of messages need to be identifiable. For this purpose, BTP defines port numbers. The present document specifies the well-known port numbers to be used by facilities layer entities.

1 Scope

The present document defines port number values for the Basic Transport Protocol as specified in ETSI EN 302 636-5-1 [i.1].

2 References

2.1 Normative 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 https://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.

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

Not applicable.

2.2 Informative 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.

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

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

[i.2] ETSI EN 302 637-2 (V1.3.2): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service".

[i.3] ETSI EN 302 637-3 (V1.2.2): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service".

[i.4] ETSI TS 101 556-1 (V1.1.1): "Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communication; Electric Vehicle Charging Spot Notification Specification".

[i.5] ETSI TS 101 556-3 (V1.1.1): "Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communications; Part 3: Communications system for the planning and reservation of EV energy supply using wireless networks".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

destination port: port identifying the destination's protocol entity at the ITS facilities layer

NOTE: Facilities layer services that do not expect replies either do not include a source port number in the header, or they set it to a default (usually 0) to indicate no reply port available. For session-based services (client-server or peer-to-peer), the source port is often set to a value from an ephemeral (dynamically assigned) subspace of the space of all port numbers.

port: ITS station-internal address that identifies a protocol entity at the facilities layer and represents an endpoint of a logical connection

source port: port number to be used by an facilities layer entity as the destination port in a subsequent reply to the originator

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ASN.1	Abstract Syntax Notation One
BTP	Basic Transport Protocol
CA	Cooperative Awareness
DEN	Decentralized Environmental Notification
EVCSN	Electric Vehicle Charging Spot Notification
EV-RSR	Electric Vehicle Recharging Spot Reservation
IVI	Infrastructure to Vehicle Information
POI	Point Of Interest
RLT	Road and Lain Topology
SA	Service Announcement
SCM	Service Cancellation Message
SREM	Signal Request Extended Message
SRM	Service Reservation Message
SSEM	Signal Status Extended Message
TLC	Traffic Light Control
TLM	Traffic Light Maneuver

4 Port number values for the Basic Transport Protocol

The Basic Transport Protocol (BTP) [i.1] multiplexes messages from the facilities layer to the networking & transport layer and de-multiplexes received GeoNetworking packets to corresponding entities in the facilities layer. At the networking & transport layer the messages need to be identified so that they can be delivered to the correct facilities layer entity. BTP manages this process.

BTP port numbers are used in BTP service primitives and the BTP headers. In the BTP service primitives *BTP-Data.request* and *BTP-Data.indication* the port numbers are in the (optional) *source port* and *destination port* parameters. In the BTP headers, the port numbers are carried in the *source port* and *destination port* fields.

BTP defines well-known ports, which are used to assign fixed port numbers to specific facilities layer entities. Facilities layer entities that have no well-known port number values assigned shall dynamically use numbers from 3 000 to 65 536.

The well-known BTP port number values shall be used as specified in table 1. They are used by the corresponding facilities layer entities and related applications to allow the identification of the message types.

Table 1: List of well-known BTP port number values

BTP port number values	Facilities service or Application	Related standard
2 001	CA	ETSI EN 302 637-2 [i.2]
2 002	DEN	ETSI EN 302 637-3 [i.3]
2 003	Reserved for RLT	Reserved for "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities Layer Protocols and Communication Requirements for Infrastructure Services"
2 004	Reserved for TLM	
2 005	Reserved for SA	Reserved for "Intelligent Transport Systems (ITS); Facilities layer function; Part 1: Services Announcement (SA) specification"
2 006	Reserved for IVI	Reserved for "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities Layer Protocols and Communication Requirements for Infrastructure Services"
2 007	Reserved for TLC (SREM)	
2 008	Reserved for TLC (SSEM)	
2 009	Allocated	N/A
2 010	EVCSN POI	ETSI TS 101 556-1 [i.4]
2 011	Allocated	N/A
2 012	Charging (EV-RSR, SRM, SCM)	ETSI TS 101 556-3 [i.5]
NOTE: The Facilities service naming resembles the naming in ASN.1.		

History

Document history		
V1.1.1	November 2016	Publication