
Intelligent transport systems — Cooperative systems — Application requirements and objectives

*Systèmes de transport intelligents — Systèmes coopératifs —
Exigences d'application et objectifs*

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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	3
5 Communication service parameters	4
5.1 Abstraction of application processes from communications	4
5.2 Communication service parameter classes	7
5.3 Operational CSPs	8
5.3.1 List of CSPs	8
5.3.2 Logical channel	8
5.3.3 Session continuity	8
5.3.4 Average ADU generation rate	9
5.3.5 Flow type	9
5.3.6 Maximum priority	9
5.3.7 Port number	9
5.3.8 Expected flow lifetime	9
5.4 Destination CSPs	9
5.4.1 List of CSPs	9
5.4.2 Destination type	10
5.4.3 Destination domain	10
5.4.4 Communication distance	10
5.4.5 Directivity	10
5.5 Performance CSPs	11
5.5.1 List of CSPs	11
5.5.2 Resilience	11
5.5.3 Minimum required throughput	11
5.5.4 Maximum allowed latency	11
5.5.5 Maximum ADU size	12
5.6 Security CSPs	12
5.6.1 List of CSPs	12
5.6.2 Need for data confidentiality	12
5.6.3 Need for data integrity	12
5.6.4 Need for non-repudiation	12
5.6.5 Need for source ITS-S application process authentication	12
5.7 Protocol CSP	13
5.7.1 List of CSPs	13
5.7.2 Communication protocol stack	13
5.7.3 Specific communications protocols	13
5.8 CSPs for sinks	13
5.9 CSPs overview	14
6 Policies and regulations	15
6.1 Cost policy	15
6.1.1 List of rules	15
6.1.2 Flat rate	15
6.1.3 Maximum rate per data unit	16
6.1.4 Maximum rate per connection time	16
6.1.5 Maximum rate per connection	16
6.2 Need for station anonymity	17
6.3 Need for station location privacy	17
6.4 Support of station authentication	17

7	ITS-S procedures for ITS-S communication profile selection	17
7.1	Overview	17
7.2	Presentation of CSPs	18
7.3	Monitoring of capabilities of communications	18
7.4	Monitoring of regulations and policies	19
7.5	Selection of ITS-S communication profiles	19
7.6	Interaction with user of ITS-SU	19
7.7	Support of other application processes	20
Annex A	(normative) ASN.1 modules	21
Annex B	(informative) Example of presentation of CSPs	28
Annex C	(informative) On communication requirements and objectives	31
Bibliography		34

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Foreword

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Introduction

Abstracting applications from communications is a useful basic architectural principle of Intelligent Transport Systems¹⁾ (ITS) embodied in the ITS station and communication architecture presented in ISO 21217:2014.

Applications and communications are linked together using the concepts of flows and paths and communication profiles described in ISO 21217:2014 with related flow and path management procedures specified in ISO 24102-6²⁾[11]. The ITS station management uses communication requirements and objectives of applications together with the capabilities of the ITS station (status of available communication protocol stacks) and sets of decision rules (regulations and policies) to select suitable parameterized ITS-S communication protocol stacks, also referred to as "ITS-S Communication Profiles" (ITS-SCP), for each source of a potential flow as illustrated in Figure 1. A set of communication requirements is referred to as a Flow Type in ISO 24102-6[11]. There may be well-known registered Flow Types as specified in ISO 17419.

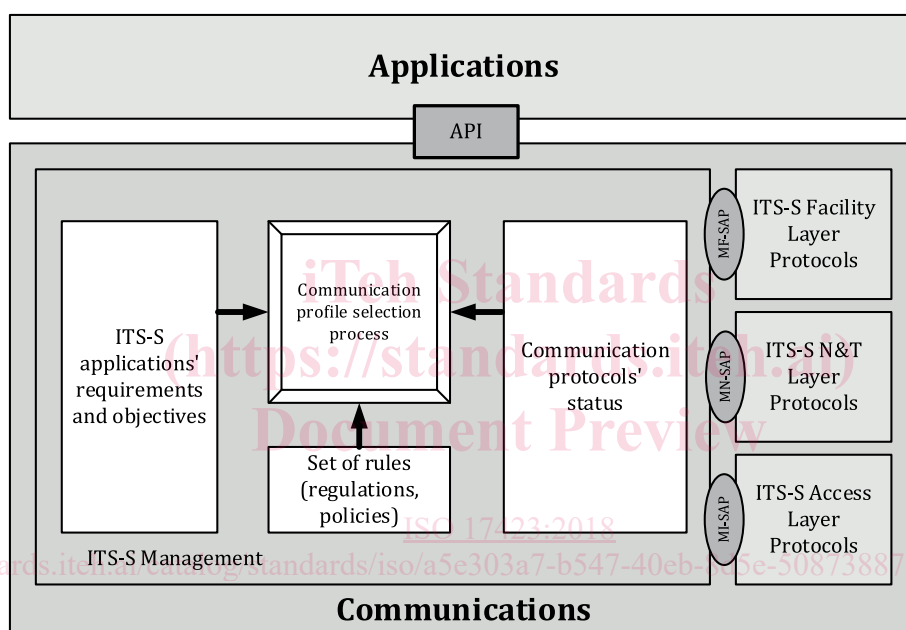


Figure 1 — ITS-S communication profile selection process

An ITS-S communication profile is independent of any destination address. However an instantiation of a communication profile includes the address of the next hop recipient, and a path includes address information of the next hop recipient, the anchor and the destination as specified in ISO 24102-6[11].

A user of an ITS station unit may be able to influence the selection of ITS-S communication profiles by providing his own policies.

Information from a Local Dynamic Map (LDM) on neighbouring stations offering certain communication capabilities may also be useful for the ITS-S communication profile selection process, although not indispensable.

1) The term "Cooperative ITS" (C-ITS) indicates specific features of ITS [4]. For the purpose of this document, no distinction between ITS and C-ITS is needed.

2) To be published.