
**Intelligent transport systems — Fast
service announcement protocol (FSAP)**

*Systèmes de transport intelligents — Protocole d'annonce de service
rapide (FSAP)*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This first edition cancels and replaces ISO 24102-5:2013 which has been technically revised.

Introduction

Provisioning of ITS services at specific locations on the road network requires awareness of the availability and the purpose of such services in order to allow a road network user deciding on the potential consumption of such a service. Awareness of services can be achieved by pull and push mechanisms. Whilst pull mechanisms are well understood and deployed for non-time-critical usage, several use cases depend on a push mechanism. Whilst pull mechanisms require a-priori knowledge of an intended service, push mechanisms support also "mandatory services" that may be locally and dynamically applicable and defined by local policies rather than global regulations.

This document illustrates and specifies the features of the cooperative push mechanism "Service Advertisement" based on the internationally harmonized message format specified in ISO/TS 16460:2016, and builds on top of any localized communications protocol stack.

WAVE service advertisement (WSA) specified in IEEE 1609.3[3] is interoperable with the service advertisement specified in this document. However this document supports more features from ISO/TS 16460:2016 than WSA does.

Understanding service advertisement and the related protocol specified in this document requires understanding of ISO/TS 16460:2016.

Requirements are specified in the following clauses of this document.

- [Clause 5](#) specifies general requirements.
- [Clause 6](#) presents a tutorial on architectural issues related to FSAP.
- [Clause 7](#) specifies protocol elements of FSAP.
- [Clause 8](#) specifies protocol procedures of FSAP.
- [Clause 9](#) specifies conformance declaration.
- [Clause 10](#) specifies test methods.
- [Annex A](#) specifies the ASN.1 module for FSAP.
- [Annex B](#) specifies details of the optional support of presenting communication requirements of FSAP to the ITS station management compliant with ISO 17423:2018.
- [Annex C](#) specifies details of the optional support of path and flow management for FSAP compliant with ISO 24102-6:2018.
- [Annex D](#) presents the implementation conformance statement proforma.

Intelligent transport systems — Fast service announcement protocol (FSAP)

1 Scope

This document specifies the "Fast Service Announcement Protocol" (FSAP).

FSAP is in support of locally advertised ITS services uniquely identified by an ITS application identifier (ITS-AID).

This document specifies message formats and related basic protocol procedures by reference to ISO/TS 16460:2016, and further related protocol requirements for operation of FSAP in the context of an ITS station specified in ISO 21217:2014.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 8825-2, *Information technology — ASN.1 encoding rules — Part 2: Specification of Packed Encoding Rules (PER) — Part 2*

ISO/IEC 8825-7, *Information technology — ASN.1 encoding rules — Part 7: Specification of Octet Encoding Rules (OER)*

ISO/TS 16460:2016, *Intelligent transport systems — Communications access for land mobiles (CALM) — Communication protocol messages for global usage*

ISO 17419, *Intelligent Transport Systems — Cooperative ITS — Globally unique identification*

ISO 17423:2018, *Intelligent Transport Systems — Cooperative ITS — Application requirements for selection of communication profiles*

ISO 21217:2014, *Intelligent transport systems — Communications access for land mobiles (CALM) — Architecture*

ISO 21218, *Intelligent Transport Systems — Hybrid communications — Access technology support*

ISO 24102-3, *Intelligent Transport Systems — ITS station management — Part 3: Service access points*

ISO 24102-4, *Intelligent Transport Systems — ITS station management — Part 4: Station-internal management communications*

ISO 24102-6:2018, *Intelligent Transport Systems — ITS station management — Part 6: Path and flow management*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21217:2014 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>