

**Intelligent Transport Systems (ITS);
Communications Architecture**

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Intelligent Transport System (ITS), and is now submitted for the Vote phase of the ETSI standards Two-step Approval Procedure.

The present document is in support of early implementations. ETSI TC ITS welcomes feedback in order to facilitate future revisions.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
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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). Elements of ITS are standardized in various standardisation organisations, both on an international level at e.g. ISO TC204, and on regional levels, e.g. in Europe at ETSI TC ITS and at CEN TC278.

The present document specifies the architecture of communications in ITS (ITSC) supporting a variety of existing and new access technologies and ITS applications. The term ITSC denotes communications protocols, related management and additional functionality. The present document is arranged as a tool-box, i.e. conformance with the present document does not require to implement the whole functionality illustrated and partly specified in the present document.

ITSC is to a large extent independent from specific communication technologies and specific ITS applications. The ITSC architecture is intended to be an open systems architecture, i.e. an architecture that is open and not proprietary.

Activities related to the scope of the present document are e.g. the European projects:

- COMeSafety (<http://www.comesafety.org>),
- COOPERS (<http://www.coopers-ip.eu>),
- CVIS (<http://www.cvisproject.org>),
- FRAME (<http://frame-online.net>),
- GeoNet (<http://www.geonet-project.eu/>),

- KAREN (<http://www.frame-online.net/home.htm>),
- Pre-Drive C2X (<http://www.pre-drive-c2x.eu>),
- SAFESPOT (<http://www.safespot-eu.org>),
- SEVECOM (<http://www.sevecom.org>),

the industry activity:

- C2C-CC (<http://www.car-to-car.org>)

the standardisation work being conducted at:

- ISO TC204 (Intelligent Transport Systems)
 - WG16 CALM (Communications Access for Land Mobiles) (<http://www.isotc204wg16.org>),
 - WG18, jointly developing standards with CEN TC278 WG16 on cooperative systems,
- IEEE 802.11 [i.1] /p and 1609 WAVE,

other research projects.

ITS applications make use of wireless communications:

- Communications between mobile ITS stations (vehicles), and between mobile ITS stations and fixed ITS stations (roadside installations), with single-hops or multiple hops between the source and destination ITS stations.
- Access to public and private (local) networks including the global Internet.
- Infrastructure and satellite broadcast.

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