
Intelligent transport systems — Roadside modules AP-DATEX data interface —

Part 1: Overview

*Systèmes de transport intelligents — Interface de données AP-DATEX
pour les modules en bord de route —*

Partie 1: Vue d'ensemble





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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 Conformance	2
6 Conventions	3
7 Architecture	4
7.1 ITS services	4
7.2 ISO 22741 series architecture	4
8 User needs	4
9 Requirements	5
9.1 Features	5
9.2 Identifiable requirements	5
9.3 Structure of data exchange requirements	5
10 Dialogues	5
10.1 Generic dialogues	5
10.2 Requesting information	5
10.3 Publication of information	5
11 Security	5
11.1 Authentication	5
11.2 Encryption	5
11.3 Security recommendation	6
Annex A (normative) Data packet structures	7
Bibliography	8

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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

A list of all parts in the ISO 22741 series series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 Background

The need for standardized communication with field devices is growing around the world. Several countries have already adopted application profile data exchange (AP-DATEX)-based field device communication standards.

There is a growing opinion, supported by empirical evidence, that standardizing this activity will result in improved intelligent transport service (ITS) performance, reduced cost, reduced deployment time and improved maintainability. The ISO 22741 series extends ISO 15784-3 by defining the management information necessary to monitor, configure and control features of field devices. The data elements defined in all parts of the ISO 22741 series may be used with any protocol, but were designed with an expectation that they would be used with one of the ISO 15784-3 protocols.

By using the approach described in this document, agencies can specify open procurements and systems can be expanded geographically in an open and non-proprietary manner, which reduces the costs, speeds and deployment, and simplifies the integration.

0.2 Overview

The AP-DATEX specified in ISO 15784-3, the International Standard for communication between traffic management centres and field devices for traffic management, is suitable for use in the following cases:

- a) Intelligent field devices with advanced functions communicate with the centre system each in equal relation.
- b) The exchanged data have a large size and relatively fixed structure.
- c) The deterministic real time feature is not required but the efficient data exchange is required.
- d) Field devices communicate with not only the centre system but also other field devices simultaneously.

This document defines management information for field devices following the AP-DATEX conventions.

0.3 Document approach and layout

This document defines:

- a) terminology and symbols used throughout the various parts of the ISO 22741 series ([Clauses 3](#) and [4](#));
- b) how conformance is defined in subsequent parts of the ISO 22741 series ([Clause 5](#));
- c) conventions used throughout the various parts of the ISO 22741 series ([Clause 6](#));
- d) the ITS architectural services defined in ISO 14813-1 that are addressed by the ISO 22741 series ([Clause 7](#));
- e) the rules used by other parts of the ISO 22741 series in defining the user needs that drive the definition of requirements ([Clause 8](#));
- f) the rules used by other parts of the ISO 22741 series in defining requirements and constraints ([Clause 9](#));
- g) a set of generic dialogues that are referenced by other parts of the ISO 22741 series ([Clause 10](#));
- h) a discussion of security that applies to all devices conforming to the ISO 22741 series ([Clause 11](#));
- i) the data packet structures for the features defined by this document ([Annex A](#)).