INTERNATIONAL STANDARD

ISO 15784-3

First edition
2008-10-15

Intelligent transport systems (ITS) — Data exchange involving roadside modules communication —

Part 3: Application profile-data exchange (AP-DATEX)

Systèmes intelligents de transport (SIT) — Échange de données impliquant la communication par modules en bordure de route —

Partie 3: Profil d'application-échange de données (AP-DATEX)

Reference number
ISO 15784-3:2008(E)

© ISO 2008

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

COPYRIGHT PROTECTED DOCUMENT

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

 © ISO 2008 – All rights reserved

Contents

Page

Foreword ... iv
Introduction ... v
1 Scope ... 1
2 Normative references ... 1
3 Terms and definitions ... 1
4 Abbreviated terms ... 4
5 General ... 5
5.1 Open systems interconnection (OSI) reference model ... 5
5.2 Scenario ... 5
6 Requirements ... 7
6.1 General Requirements ... 7
6.1.1 Stack definition ... 7
6.1.2 Optional features ... 7
6.1.3 Compatibility ... 7
6.2 Application layer requirements ... 7
6.3 Presentation layer requirements ... 7
6.4 Session layer requirements ... 7
6.5 Transport layer requirements ... 7
Annex A (normative) **Application profile for DATEX-ASN profile requirement list** ... 8
Annex B (informative) **Compatibility with other application profiles** ... 14
Bibliography ... 15

This document is a preview generated by EVS

© ISO 2008 – All rights reserved

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 15784-3 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

ISO 15784 consists of the following parts, under the general title *Intelligent transport systems (ITS) — Data exchange involving roadside modules communication*:

— *Part 1: General principles and documentation framework of application profiles*

— *Part 3: Application profile-data exchange (AP-DATEX)*

This document is a preview generated by EVS

 © ISO 2008 – All rights reserved

Introduction

The functional requirements for communication between a traffic management centre and roadside modules used for traffic management are varied because internationally there are many kinds of roadside modules for traffic management, such as signal controllers, dynamic message signs and vehicle detectors. In the development of standards for data exchanges between a traffic management centre and roadside modules used for traffic management, ISO/TC 204/WG9 agreed that the concept of a single standard for all countries and devices might not be appropriate, but a set of standards for different types of roadside module might be more appropriate.

As a result, ISO/TC 204/WG9 adopted the philosophy of producing profile documents to specify how data should be exchanged.

In the development of this part of ISO 15784, reference was made to the existing standards about profiles, specifically NTCIP 8003 which is the US standard for a profile framework, and ISO/IEC TR 10000, which is a series of Technical Reports under the general title *Information technology — Framework and taxonomy of International Standardized Profiles*.

The purpose of a profile is to specify the use of one or more base standards to provide a requested function. Because there are multiple functional requirements to data exchange between a centre and the roadside modules, ISO 15784 defines multi-part profiles.

This part of ISO 15784 defines only the application profile. End application data is defined in the data-registry. Each country should define lower layer profiles based on the internationally standardized protocols because each country has its own circumstance on communication infrastructure.

This document is a preview generated by EVS

© ISO 2008 – All rights reserved

Intelligent transport systems (ITS) — Data exchange involving roadside modules communication —

Part 3:
Application profile-data exchange (AP-DATEX)

This document is a preview generated by EVS

1 Scope

The purpose of this part of ISO 15784 is to define an application profile referring ISO 14827 and other base standards.

The application profile specified in this part of ISO 15784 is used to exchange data and messages in the following cases.

a) Between a traffic management centre and roadside modules for traffic management.

b) Between roadside modules used for traffic management.

The scope of this part of ISO 15784 does not include the communication between roadside modules and in-vehicle units, in-vehicle communication, in-cabinet communication or motion video transmission from a camera or recorded media.

2 Normative references

The following referenced documents are indispensable for the application 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 8825-1:2002, *Information technology — ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER) — Part 1*

ISO/IEC TR 10000-2:1998, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 2: Principles and Taxonomy for OSI profiles*

ISO 14827-2:2005, *Transport information and control systems — Data interfaces between centres for transport information and control systems — Part 2: DATEX-ASN*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
application layer
layer containing all functions needed for the distributed applications and not already provided by the presentation service

NOTE The application layer constitutes layer 7 of the OSI model.

© ISO 2008 – All rights reserved