INTERNATIONAL STANDARD

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Intelligent transport systems — Communication access for land mobiles (CALM) — Non-IP networking —

Part 2: Legacy system support

Systèmes intelligents de transport — Accès aux communications des services mobiles terrestres (CALM) — Réseautique non-IP —

Partie 2: Support pour systèmes hérités

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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. www.iso.org/directives

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The committee responsible for this document is ISO/TC 204, *Intelligent transport systems.*

This first edition of ISO 29281-2, together with ISO 29281-1, cancels and replaces ISO 29281:2011.

ISO 29281 consists of the following parts, under the general title *Intelligent transport systems — Communication access for land mobiles (CALM) — Non-IP networking*:

— *Part 1: Fast networking & transport layer protocol (FNTP)*

— *Part 2: Legacy system support*

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Introduction

This part of ISO 29281 is part of a family of International Standards for communications access for land mobiles (CALM). An introduction to the whole set of International Standards is provided in ISO 21217.

This part of ISO 29281 is the second part of a multi-part series which determines intelligent transport systems (ITS) communication functionalities which are different to functionalities from the set of Internet protocols.

These functionalities are protocols and procedures located in the various layers and entities of the ITS station.

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Intelligent transport systems — Communication access for land mobiles (CALM) — Non-IP networking —

Part 2: Legacy system support

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1 Scope

This part of ISO 29281 specifies elements of communications for cooperative ITS which are not based on the Internet protocol.

The following architectures, procedures and protocols are specified:

— Support of communication interfaces (DSRC-CI) using ISO 15628;

— Support of ISO 15628 DSRC applications via an ITS ad-hoc access technology.

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

ISO 15628, *Intelligent transport systems — Dedicated short range communication (DSRC) — DSRC application layer*

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

ISO 21218, *Intelligent transport systems — Communications access for land mobiles (CALM) — Access technology support*

ISO 24102-1, *Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management — Part 1: Local management*

ISO 24102-3, *Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management — Part 3: Service access points*

ISO 24102-4, *Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management — Part 4: Station-internal management communications.*

ISO 24102-5, *Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management — Part 5: Fast service advertisement protocol (FSAP)*

ISO 24103, *Intelligent transport systems — Communications access for land mobiles (CALM) — Media adapted interface layer (MAIL)*

ISO 29281-1, *Intelligent transport systems — Communication access for land mobiles (CALM) — Non-IP networking — Part 1: Fast networking & transport layer protocol (FNTP)*

ETSI TS 102 985-1, *Intelligent transport systems (ITS) — Communications Access for Land Mobiles (CALM) — Test specifications for non-IP networking (ISO 29281) — Part 1: Protocol implementation conformance "statement (PICS) proforma*

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ETSI TS 102 985-2, *Intelligent transport systems (ITS) — Communications Access for Land Mobiles (CALM) — Test specifications for non-IP networking (ISO 29281) — Part 2: Test suite structure & test purposes (TSS&TP)*

ETSI TS 102 985-3, *Intelligent transport systems (ITS) — Communications Access for Land Mobiles (CALM) — Test specifications for non-IP networking (ISO 29281) — Part 3: Abstract test suite and partial PIXIT (ATS) specification*

3 Requirements

Communication functionality, which is different to the functionality out of the set of Internet protocols (IP), is referred to as non-IP functionality in this multi-part series.

The functionality to support legacy systems, especially those related to ISO 15628 "DSRC application layer" shall be as specified in this part of ISO 29281.

Detailed requirements are specified in the following clauses of this part of ISO 29281:

— Clause 4 specifies architectural elements;

— Clause 5 specifies facility layer protocols;

— Clause 6 specifies conformance declaration;

— Clause 7 specifies test methods;

— Annexes A and B provide further mandatory requirements;

— The informative Annex C provides 15628 legacy service guidelines.

4 Architecture

4.1 ITS station

The specifications given in this part of ISO 29281 shall comply with the ITS station architecture and with the concept of an ITS station communication unit (ITS-SCU) as specified in ISO 21217 and ISO 24102-4.

4.2 Communication scenarios

Communication scenarios are specified in ISO 24102-1 and in ISO 21217.

4.3 Implementation scenarios

The protocols specified in this part of ISO 29281 may support the implementation architectures introduced in ISO 21217 and illustrated in Figures 1 and 2 with an ITS station and a peer DSRC station.

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