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Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Inter-exchange signalling protocol — Short message service

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseaux privés avec intégration de services — Protocole de signalisation entre commutateurs — Service de message court

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

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 21990 was prepared by ECMA (as ECMA-325) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

Annexes A and E form a normative part of this International Standard. Annexes B, C and D are for information only.

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Introduction

This International Standard is one of a series of Standards defining services and signalling protocols applicable to Private Integrated Services Digital Networks (PISNs). The series uses ISDN concepts as developed by ITU-T and conforms to the framework of International Standards on Open Systems Interconnection as defined by ISO/IEC.

This International Standard specifies the signalling protocol for use at the Q reference point in support of the Short Message Service. The protocol defined in this Standard forms part of the PSS1 protocol (informally known as QSIG).

This International Standard is based upon the practical experience of ECMA member companies and the results of their active and continuous participation in the work of ISO/IEC JTC 1, ITU-T, ETSI and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

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1 Scope

This International Standard specifies the signalling protocol for the support of the Short Message Service (SMS) at the Q reference point between Private Integrated services Network eXchanges (PINXs) connected together within a Private Integrated Services Network (PISN).

This service is based on GSM 03.40. The Service Centre functionality described in this International Standard is equal to the functionality of a Service Centre in GSM 03.40. Thus, for interoperability with a GSM network, it is only necessary to implement a QSIG interface.

NOTE 1 - The interworking with other air interfaces is not precluded, but is outside the scope of this International Standard.

NOTE 2 - The Short Message Service is a special type of basic service but is described in the present document as a supplementary service.

The Short Message Service is a service which permits a served user to send a message of limited size to another user in the same PISN or another network.

The Q reference point is defined in ISO/IEC 11579-1.

Service specifications are produced in three stages and according to the method specified in ETS 300 387. This International Standard contains the stage 3 specification for the Q reference point and satisfies the requirements identified by the stage 1 and stage 2 specifications in ISO/IEC 21989.

The signalling protocol for SMS operates on top of the signalling protocol for the connection oriented call independent APDU transport mechanism and uses certain further aspects of the generic procedures for the control of supplementary services specified in ISO/IEC 11582.

This International Standard also specifies additional signalling protocol requirements for the support of interactions at the Q reference point between SMS and supplementary services and ANFs.

This International Standard is applicable to PINXs which can be interconnected to form a PISN.

2 Conformance

In order to conform to this International Standard, a PINX shall satisfy the requirements identified in the Protocol Implementation Conformance Statement (PICS) proforma in annex A.

3 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8601:2000, *Data elements and interchange formats - Information interchange - Representation of dates and times*

ISO/IEC 10646-1:2000, *Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane*

ISO/IEC 11572:2000, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Circuit mode bearer services - Inter-exchange signalling procedures and protocol*

ISO/IEC 11579-1:1994, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Part 1: Reference configuration for PISN exchanges (PINX)*

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ISO/IEC 11582:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Generic functional protocol for the support of supplementary services - Inter-exchange signalling procedures and protocol*

ISO/IEC 13868:1995, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Inter-exchange signalling protocol - Name identification supplementary services*

ISO/IEC 15506:2000, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network (PISN) - Inter-Exchange Signalling Protocol - Message Waiting Indication Supplementary Service*

ISO/IEC 21989:2002, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Short message service*

ETSI GTS GSM 03.38, *Digital cellular telecommunications systems (Phase 2+) (GSM); Alphabets and language-specific information*

ETSI TS 100 901, *Digital cellular telecommunications systems (Phase 2+); Technical realization of the Short Message Service (SMS) (GSM 03.40)*

ETSI TS 100 942, *Digital cellular telecommunications systems (Phase 2+) (GSM); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface* (GSM 04.11)

ETSI TS 101 032, *Digital cellular telecommunications systems (Phase 2+) (GSM); Compression algorithm for text messaging services* (GSM 03.42)

ETSI ETS 300 387, *Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services*

ETSI ETS 300 599, *Digital cellular telecommunications systems (Phase 2) (GSM); Mobile Application Part (MAP) specification* (GSM 09.02)

ITU-T Rec. I.112:1993, *Vocabulary of terms for ISDNs*

ITU-T Rec. I.210:1993, *Principles of telecommunication services supported by an ISDN and the means to describe them*

ITU-T Rec. Z.100:1999, *Specification and description language (SDL)*

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