INTERNATIONAL STANDARD

ISO/IEC 17875

First edition
2000-04-15

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Private User Mobility (PUM) — Registration supplementary service

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseau privé à intégration de services — Spécification, modèle fonctionnel et flux d'informations — Mobilité de l'usager privé (PUM) — Service supplémentaire d'enregistrement

Reference number
ISO/IEC 17875:2000(E)

© ISO/IEC 2000

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.

© ISO/IEC 2000

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 22 734 10 79
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

© ISO/IEC 2000 – All rights reserved

Contents

Foreword		**v**
Introduction		**vi**
1	Scope	**1**
2	Conformance	**1**
3	Normative references	**1**
4	Definitions	**2**
4.1	External definitions	**2**
4.2	AllCall registration	**3**
4.3	Additional network feature (ANF)	**3**
4.4	Alternative identifier	**3**
4.5	Destination number	**3**
4.6	Home Data Base (HDB)	**3**
4.7	Home PINX	**3**
4.8	Hosting address	**3**
4.9	InCall registration	**3**
4.10	Incoming PUM call	**3**
4.11	Originating number	**3**
4.12	OutCall registration	**3**
4.13	Outgoing PUM call	**3**
4.14	PUM user identity	**3**
4.15	Private User Mobility (PUM)	**3**
4.16	(PUM) de-registration	**3**
4.17	PUM registration	**3**
4.18	PUM number	**3**
4.19	PUM user	**3**
4.20	Registration session	**3**
4.21	Visitor area	**3**
4.22	Visitor Data Base (VDB)	**3**
4.23	Visitor PINX	**3**
5	List of acronyms	**3**
6	SS-PUMR stage 1 specification	**5**
6.1	Description	**5**
6.1.1	General description	**5**
6.1.2	Qualifications on applicability to telecommunication services	**5**
6.2	Procedure	**5**
6.2.1	Provision/withdrawal	**5**
6.2.2	Normal procedures	**6**
6.2.3	Exceptional procedures	**7**
6.3	Interaction with other supplementary services and ANFs	**7**
6.3.1	Number identification services (SS-CLIP, SS-COLP, SS-CLIR)	**7**
6.3.2	Calling Name Identification Presentation (SS-CNIP)	**7**
6.3.3	Connected Name Identification Presentation (SS-CONP)	**7**
6.3.4	Calling/Connected Name Identification Restriction (SS-CNIR)	**7**
6.3.5	Call Completion to Busy Subscriber (SS-CCBS)	**8**
6.3.6	Call Completion on No Reply (SS-CCNR)	**8**
6.3.7	Call Transfer (SS-CT)	**8**
6.3.8	Call Forwarding Unconditional (SS-CFU)	**8**
6.3.9	Call Forwarding Busy (SS-CFB)	**8**

© ISO/IEC 2000 – All rights reserved

6.3.10 Call Forwarding No Reply (SS-CFNR) **8**
6.3.11 Call Deflection (SS-CD) **8**
6.3.12 Path Replacement (ANF-PR) **8**
6.3.13 Call Offer (SS-CO) **8**
6.3.14 Call Intrusion (SS-CI) **8**
6.3.15 Do not Disturb (SS-DND) **8**
6.3.16 Do not Disturb Override (SS-DNDO) **8**
6.3.17 Advice of Charge (SS-AOC) **8**
6.3.18 Recall (SS-RE) **8**
6.3.19 Call Interception (ANF-CINT) **8**
6.3.20 Transit Counter (ANF-TC) **8**
6.3.21 Route Restriction Class (ANF-RRC) **8**
6.3.22 Message Waiting Indication (SS-MWI) **8**
6.3.23 Wireless Terminal Location Registration (SS-WTLR) **8**
6.3.24 Wireless Terminal Incoming Call (ANF-WTMI) **9**
6.3.25 Wireless Terminal Outgoing Call (ANF-WTMO) **9**
6.3.26 Wireless Terminal Authentication of a WTM User (SS-WTAT) **9**
6.3.27 Wireless Terminal Authentication of the PISN (SS-WTAN) **9**
6.3.28 Private User Mobility Incoming Call (ANF-PUMI) **9**
6.3.29 Private User Mobility Outgoing Call (ANF-PUMO) **9**
6.3.30 Common Information (ANF-CMN) **9**
6.3.31 Call Priority Interruption (Protection) (SS-CPI(P)) **9**

6.4 Interworking considerations **9**
6.5 Overall SDL **10**

7 SS-PUMR stage 2 specification **10**

7.1 Functional model **10**

7.1.1 Functional model description **10**
7.1.2 Description of Functional Entities **11**
7.1.3 Relationship of functional model to basic call functional model **12**

7.2 Information flows **12**

7.2.1 Definition of information flows **12**
7.2.2 Relationship of information flows to basic call information flows **18**
7.2.3 Information flow sequences **18**

7.3 Functional Entity actions **24**

7.3.1 Actions of FE1 **24**
7.3.2 Actions of FE2 **25**
7.3.3 Actions of FE3 **25**
7.3.4 Actions of FE4 **25**
7.3.5 Actions of FE5 **25**
7.3.6 Actions of FE6 **26**
7.3.7 Actions of FE7 **26**
7.3.8 Actions of FE8 **26**

7.4 Functional entity behaviour **27**

7.4.1 Behaviour of FE1 **27**
7.4.2 Behaviour of FE2 **29**
7.4.3 Behaviour of FE3 **32**
7.4.4 Behaviour of FE4 **33**
7.4.5 Behaviour of FE5 **37**
7.4.6 Behaviour of FE6 **40**
7.4.7 Behaviour of FE7 **41**
7.4.8 Behaviour of FE8 **42**

7.5 Allocation of Functional Entities to physical equipment **43**
7.6 Interworking considerations **43**

 © ISO/IEC 2000 – All rights reserved

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.

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

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. 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.

International Standard ISO/IEC 17875 was prepared by ECMA (as ECMA-281) 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.

© ISO/IEC 2000 – All rights reserved

Introduction

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

This International Standard specifies the Private User Mobility Registration (PUMR) supplementary service.

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 JTC1, ITU-T, ETSI and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

There is currently no equivalent service specified by ITU-T or ETSI for public ISDN.

© ISO/IEC 2000 – All rights reserved

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Private User Mobility (PUM) — Registration supplementary service

1 Scope

This International Standard specifies the Supplementary Service (SS) Private User Mobility Registration (PUMR), which is applicable to various basic services supported by Private Integrated Services Networks (PISN). Basic services are specified in ISO/IEC 11574.

SS-PUMR is a supplementary service that enables a PUM user to register at, or de-register from, any wired or wireless terminal within the PISN. The ability to register at different wired and wireless terminals in the PISN at different times enables the PUM user to maintain the provided services (including the ability to make and receive calls) at different access points.

Supplementary service specifications are produced in three stages, according to the method described in CCITT Rec. I.130. This International Standard contains the stage 1 and stage 2 specifications of SS-PUMR. The stage 1 specification (clause 6) specifies the general feature principles and capabilities. The stage 2 specification (clause 7) identifies the Functional Entities involved in the supplementary service and the information flows between them.

2 Conformance

In order to conform to this International Standard, a stage 3 standard shall specify signalling protocols and equipment behaviour that are capable of being used in a PISN which supports the supplementary service specified in this International Standard. This means that, to claim conformance, a stage 3 standard is required to be adequate for the support of those aspects of clause 6 (stage 1) and clause 7 (stage 2) which are relevant to the interface or equipment to which the stage 3 standard applies.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 11571:1998, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Addressing.*

ISO/IEC 11574:1994, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Circuit-mode 64 kbit/s bearer services — Service description, functional capabilities and information flows.*

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).*

ISO/IEC 13866:1995, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call completion supplementary services.*

ISO/IEC 15428:1999, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Wireless Terminal Location Registration supplementary service and Wireless Terminal Information Exchange additional network feature.*

ISO/IEC 15430:1999, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Wireless terminal call handling additional network features.*

© ISO/IEC 2000 – All rights reserved

ISO/IEC 15432:1999, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Wireless Terminal Authentication supplementary services (WTAT and WTAN).*

ISO/IEC 17877:2000, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Private User Mobility (PUM) — Call handling additional network features.*

CCITT Rec. I.130,1988, *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN (Blue Book).*

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.100:1993, *Specification and description language.*

© ISO/IEC 2000 – All rights reserved