

INTERNATIONAL
STANDARD

ISO/IEC
21888

First edition
2001-09-01

**Information technology —
Telecommunications and information
exchange between systems — Private
Integrated Services Network —
Specification, functional model and
information flows — Call Identification and
Call Linkage Additional Network Feature**

*Technologies de l'information — Télécommunications et échange
d'information entre systèmes — Réseau privé à intégration de services —
Spécifications, modèle fonctionnel et flux d'informations — Identification
d'appel et caractéristique de réseau additionnelle de liaison d'appel*



Reference number
ISO/IEC 21888:2001(E)

© ISO/IEC 2001

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 2001

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.ch
Web www.iso.ch

Printed in Switzerland

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Definitions	2
4.1 External definitions	2
4.2 Additional Network Feature (ANF)	3
4.3 ANF-CIDL user	3
4.4 Call	3
4.5 Call Identification Data, CIDL-Data	3
4.6 Call Linkage Data	3
4.7 Global Call Identification, Global Call ID, GID	3
4.8 Leg Identification, Leg ID, LID	3
4.9 Thread Identification, Thread ID, TID	3
5 List of acronyms	3
6 ANF-CIDL stage 1 specification	4
6.1 Description	4
6.1.1 General description	4
6.1.2 Qualifications on applicability to telecommunication services	4
6.2 Procedure	4
6.2.1 Provision/withdrawal	4
6.2.2 Normal procedures	4
6.2.3 Exceptional procedures	4
6.3 Interaction with other supplementary services and ANFs	4
6.3.1 Calling Line Identification Presentation (SS-CLIP)	5
6.3.2 Connected Line Identification Presentation (SS-COLP)	5
6.3.3 Calling/Connected Line Identification Restriction (SS-CLIR)	5
6.3.4 Calling Name Identification Presentation (SS-CNIP)	5
6.3.5 Calling Name Identification Restriction (SS-CNIR)	5
6.3.6 Connected Name Identification Presentation (SS-CONP)	5
6.3.7 Completion of Call to Busy Subscriber (SS-CCBS)	5
6.3.8 Completion of Call on No Reply (SS-CCNR)	5
6.3.9 Call Transfer (SS-CT)	5
6.3.10 Call Forwarding Unconditional (SS-CFU)	5
6.3.11 Call Forwarding Busy (SS-CFB)	5
6.3.12 Call Forwarding No Reply (SS-CFNR)	5
6.3.13 Call Deflection (SS-CD)	5
6.3.14 Path Replacement (ANF-PR)	5
6.3.15 Call Offer (SS-CO)	6
6.3.16 Call Intrusion (SS-CI)	6
6.3.17 Do not Disturb (SS-DND)	6
6.3.18 Do not Disturb Override (SS-DNDO)	6
6.3.19 Advice of Charge (SS-AOC)	6
6.3.20 Recall (SS-RE)	6

6.3.21	Call Interception (ANF-CINT)	6
6.3.22	Transit Counter (ANF-TC)	6
6.3.23	Route Restriction Class (ANF-RRC)	6
6.3.24	Message Waiting Indication (SS-MWI)	6
6.3.25	Wireless Terminal Location Registration (SS-WTLR)	6
6.3.26	Wireless Terminal Incoming Call (ANF-WTMI)	6
6.3.27	Wireless Terminal Outgoing Call (ANF-WTMO)	7
6.3.28	Wireless Terminal Authentication of a WTM User (SS-WTAT)	7
6.3.29	Wireless Terminal Authentication of the PISN (SS-WTAN)	7
6.3.30	Private User Mobility Incoming Call (ANF-PUMI)	7
6.3.31	Private User Mobility Outgoing Call (ANF-PUMO)	7
6.3.32	Private User Mobility Registration (SS-PUMR)	7
6.3.33	Common Information (ANF-CMN)	7
6.3.34	Call Priority Interruption (Protection) (SS-CPI(P))	7
6.3.35	Single Step Call Transfer (SSCT)	7
6.3.36	Other interactions	7
6.4	Interworking considerations	7
6.5	Overall SDL	7
7	ANF-CIDL stage 2 specification	8
7.1	Functional model	8
7.1.1	Functional model description	8
7.1.2	Description of functional entities	9
7.1.3	Example relationship of functional model to Basic Call functional model	9
7.2	Information flows	9
7.2.1	Definition of information flows	9
7.2.2	Examples of information flow sequences	10
7.3	Functional Entity actions	12
7.3.1	Functional Entity actions of FE1	12
7.3.2	Functional Entity actions of FE2	12
7.3.3	Functional Entity actions of FE3	12
7.4	Functional Entity behaviour	12
7.4.1	Behaviour of FE1	13
7.4.2	Behaviour of FE2	14
7.4.3	Behaviour of FE3	15
7.5	Allocation of Functional Entities to physical equipment	16
7.6	Interworking considerations	16

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 21888 was prepared by ECMA (as ECMA-313) 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.

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 the 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 Call Identification and Call Linkage (CIDL) additional network feature.

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.

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call Identification and Call Linkage Additional Network Feature

1 Scope

This International Standard specifies the Additional Network Feature (ANF) Call Identification and Call Linkage (CIDL), which is applicable to various basic services supported by Private Integrated Services Networks (PISN). Basic services are specified in ISO/IEC 11574.

ANF-CIDL is an additional network feature which allows the identification and correlation of calls throughout a PISN by assigning unambiguous identifiers to each new call and also, as an option, to transformed and logically linked calls.

NOTE 1 - This ANF has been developed to support the use of CSTA (ISO/IEC 18051) in a networked environment, i.e. in a PISN. Use of this ANF for other applications is not precluded.

Supplementary service specifications are produced in three stages, according to the method described in ETS 300 387. This International Standard contains the stage 1 and stage 2 specifications of ANF-CIDL. 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 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/IEC 11571:1998, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Networks — Addressing*

ISO/IEC 11574:2000, *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 13863:1998, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Path replacement additional network feature*

ISO/IEC 13865:1995, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call transfer supplementary service*

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 13872:1995, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call diversion supplementary services*

ISO/IEC 14841:1996, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call offer supplementary service*

ISO/IEC 14842:1996, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Do not disturb and do not disturb override supplementary services*

ISO/IEC 14845:1996, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call intrusion supplementary service*

ISO/IEC 15053:1997, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Call interception additional network feature*

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 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*

ISO/IEC 17875:2000, *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*

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*

ISO/IEC 18051:2000, *Information technology — Telecommunications and information exchange between systems — Services for Computer Supported Telecommunications Applications (CSTA) Phase III*

ISO/IEC 19459:2001, *Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Specification, functional model and information flows — Single step call transfer supplementary service*

ETS 300 387:1994, *Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services*

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)*