

**Information
technology —
Telecommunications
and information
exchange between
systems —
Private Integrated
Services Network —
Inter-exchange
signalling protocol —
Common information
additional network
feature**

ICS 33.040.35

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

National foreword

This British Standard reproduces verbatim ISO/IEC 15772:1998 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee IST/6, Data communications, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC title page, pages ii to iv, pages 1 to 21 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Committee and comes into effect on 15 March 1999

© BSI 05-1999

ISBN 0 580 29268 1

Contents

	Page
National foreword	Inside front cover
Foreword	iv
Text of ISO/IEC 15772	1

INTERNATIONAL STANDARD

ISO/IEC 15772

First edition
1998-11-01

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Inter-exchange signalling protocol — Common information additional network feature

*Technologies de l'information — Télécommunications et échange
d'information entre systèmes — Réseau privé à intégration de services —
Protocole de signalisation d'échange — Caractéristique de réseau
additionnelle d'information courante*



Contents

	Page
Foreword	iv
Introduction	1
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Definitions	2
4.1 External definitions	2
5 List of acronyms	3
6 Signalling protocol for the support of ANF-CMN	3
6.1 ANF-CMN description	3
6.2 ANF-CMN operational requirements	3
6.2.1 Requirements on an Originating PINX	3
6.2.2 Requirements on a Terminating PINX	3
6.2.3 Requirements on a Transit PINX	3
6.3 ANF-CMN coding requirements	3
6.3.1 Operations	3
6.3.2 Notifications	6
6.3.3 Information elements	6
6.3.4 Messages	6
6.4 ANF-CMN State definitions	7
6.4.1 States at the Originating PINX	7
6.4.2 States at the Terminating PINX	7
6.5 ANF-CMN Signalling procedures for activation, deactivation and registration	7
6.6 ANF-CMN Signalling procedures for invocation and operation	7
6.6.1 Actions at the Originating PINX	7
6.6.2 Actions at the Terminating PINX	8
6.6.3 Actions at a Transit PINX	9
6.7 ANF-CMN Impact of interworking with public ISDNs	9
6.8 ANF-CMN Impact of interworking with non-ISDNs	9
6.9 Protocol interactions between ANF-CMN and other supplementary services and ANFs	9
6.9.1 Interactions with Calling Name Identification Presentation (CNIP)	9
6.9.2 Interactions with Connected Name Identification Presentation (CONP)	9
6.9.3 Interactions with Call Forwarding Unconditional (CFU)	9
6.9.4 Interactions with Call Forwarding Busy (CFB)	9
6.9.5 Interactions with Call Forwarding No Reply (CFNR)	9
6.9.6 Interactions with Call Deflection (CD)	10
6.9.7 Interactions with Call Transfer (CT)	10
6.9.8 Interactions with Completion of Call on Busy Subscriber (CCBS)	10
6.9.9 Interactions with Completion of Call on No Reply (CCNR)	10
6.9.10 Interactions with Call Intrusion (CI)	10
6.9.11 Interactions with Call Offer (CO)	10
6.9.12 Interactions with Do Not Disturb (DND)	10
6.9.13 Interactions with Do Not Disturb Override (DNDO)	10
6.9.14 Interactions with Call Interception (CINT)	10
6.9.15 Interactions with Advice Of Charge (AOC)	10

	Page
6.9.16 Interactions with Message Waiting Indication (MWI)	10
6.9.17 Interactions with Path Replacement (PR)	10
6.9.18 Interactions with Recall (RE)	11
6.9.19 Interactions with Wireless Terminal Mobility, Outgoing call (WTMO)	11
6.9.20 Interactions with Wireless Terminal Mobility, Incoming call (WTMI)	11
6.9.21 Interactions with Wireless Terminal, Location Registration (WTLR)	11
6.9.22 Interactions with Wireless Terminal, Authentication (WTAN, WTAT)	11
6.9.23 Interactions with Transit Counter (TC)	11
6.10 ANF-CMN Parameter values (timers)	11
Annex A (normative) Protocol Implementation	
Conformance Statement (PICS) Proforma	12
Annex B (informative) Examples of message sequences	16
Annex C (informative) Specification and Description	
Language (SDL) representation of procedures	19
Figure B.1 — Example of normal operation of ANF-CMN solicited service	17
Figure B.2 — Example of normal operation of ANF-CMN in forward direction unsolicited service	17
Figure B.3 — Example of normal operation of ANF-CMN in both direction unsolicited service	18
Figure B.4 — Example of normal operation of ANF-CMN solicited and unsolicited service combined	19
Figure C.1 — SDL Representation of ANF-CMN at the Originating PINX	20
Figure C.2 — SDL Representation of ANF-CMN at the Terminating PINX	21
Table 1 — Operations in Support of ANF-CMN	4

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. 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.

International Standard ISO/IEC 15772 was prepared by ECMA (as ECMA-251) 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.

Annex A forms an integral part of this International Standard. Annex B and Annex C are for information only.

Introduction

This International Standard is one of a series of standards defining services and signalling protocols applicable to Private Integrated Services Networks. The series uses the ISDN concepts as developed by ITU-T and is also within the framework of standards for open systems interconnection as defined by ISO. This International Standard specifies the signalling protocol for use at the Q reference point in support of the Common Information 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 JTC 1, ITU-T, ETSI and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

1 Scope

This International Standard specifies the signalling protocol for the support of the Common Information additional network feature (ANF-CMN) at the Q reference point between Private Integrated Services Network Exchanges (PINX) connected together within a Private Integrated Services Network (PISN).

ANF-CMN is an additional network feature which enables the exchange of Common Information between entities acting on behalf of the two ends of a connection through a PISN. This Common Information is a collection of miscellaneous information that relates to the user or equipment at one end of a connection and includes one or more of the following: Feature Identifiers, Party Category, Equipment Identity. This information, when received by an entity, can be used for any purpose, e.g. as the basis for indications to the local user or to another network or in order to filter feature requests.

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

Additional network feature specifications are produced in three stages and according to the method described in ITU-T Rec. I.130. 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 15771.

The signalling protocol for ANF-CMN operates on top of the signalling protocol for basic circuit switched call control, as specified in ISO/IEC 11572, and uses certain 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 ANF-CMN and other supplementary services and ANFs.

NOTE Additional interactions that have no impact on the signalling protocol at the Q reference point can be found in the relevant stage 1 specifications.

This International Standard is applicable to PINXs which can interconnect 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.

Conformance to this International Standard includes conforming to those clauses that specify protocol interactions between ANF-CMN and other supplementary services and ANFs for which signalling protocols at the Q reference point are supported in accordance with the stage 3 standards concerned.

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 11572:1997, *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)*.