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**Information technology —  
Telecommunications and information  
exchange between systems — Private  
Integrated Services Network — Mapping  
functions for the employment of a circuit  
mode basic service and the  
supplementary service user-to-user  
signalling as a pair of on-demand  
inter-PINX connections**

*Technologies de l'information — Télécommunications et échange  
d'information entre systèmes — Réseau privé avec intégration de  
services — Fonctions d'application pour l'emploi d'un service de base  
en mode circuit et de la signalisation utilisateur/utilisateur du service  
supplémentaire en tant que paire de connexions entre PINX sur  
demande*

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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](mailto:copyright@iso.ch)  
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## Contents

Foreword.....	iv
Introduction .....	v
<b>1</b> Scope .....	<b>1</b>
<b>2</b> Conformance .....	<b>1</b>
<b>3</b> Normative references .....	<b>1</b>
<b>4</b> Definitions .....	<b>2</b>
<b>4.1</b> External definitions .....	<b>2</b>
<b>4.2</b> Special definitions .....	<b>2</b>
<b>4.2.1</b> Calling PINX .....	<b>2</b>
<b>4.2.2</b> Called PINX .....	<b>2</b>
<b>4.2.3</b> Channel .....	<b>2</b>
<b>4.2.4</b> Inter-PINX Connection .....	<b>2</b>
<b>4.2.5</b> Inter-PINX Link .....	<b>2</b>
<b>5</b> List of acronyms .....	<b>2</b>
<b>6</b> Introduction .....	<b>3</b>
<b>7</b> Capabilities at the Q reference point .....	<b>3</b>
<b>8</b> Mapping functions.....	<b>3</b>
<b>8.1</b> Physical adaptation.....	<b>4</b>
<b>8.1.1</b> ISDN primary rate user-network Layer 1 interface (1544 kbit/s) .....	<b>4</b>
<b>8.1.2</b> ISDN primary rate user-network Layer 1 interface (2048 kbit/s) .....	<b>4</b>
<b>8.1.3</b> ISDN basic user-network Layer 1 interface .....	<b>4</b>
<b>8.2</b> Mapping matrix .....	<b>5</b>
<b>8.2.1</b> Channel allocation .....	<b>5</b>
<b>8.2.2</b> Bearer conditioning for the D <sub>Q</sub> -channel .....	<b>5</b>
<b>9</b> IPC control functions.....	<b>5</b>
<b>9.1</b> IPC establishment.....	<b>5</b>
<b>9.2</b> IPC clearing.....	<b>6</b>
<b>10</b> IPL control functions.....	<b>6</b>
<b>10.1</b> Static pre-conditions for IPL establishment .....	<b>6</b>
<b>10.2</b> IPL establishment .....	<b>6</b>
<b>10.3</b> Transfer of inter-PINX signalling Layer 2 information.....	<b>6</b>
<b>10.4</b> Use of message segmentation.....	<b>6</b>
<b>Annex A</b> Implementation Conformance Statement (ICS) Proforma.....	<b>7</b>

## **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 17309 was prepared by ECMA (as ECMA-244) 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 a normative part of this International Standard.

## Introduction

This International Standard is one of a series of standards defining mapping functions in exchanges of Private Integrated Services Networks required for the utilization of intervening network scenarios. The series uses the ISDN concepts as developed by ITU-T (formerly CCITT) and is also within the framework of standards for open systems interconnection as defined by ISO/IEC.

This International Standard specifies mapping functions for the type of scenarios where two PINXs are interconnected via on-demand connections via the public ISDN using the supplementary service User-to-User Signalling for carrying signalling information.

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.

# Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Mapping functions for the employment of a circuit mode basic service and the supplementary service user-to-user signalling as a pair of on-demand inter-PINX connections

## 1 Scope

This International Standard specifies the mapping functions for a pair of on-demand inter-PINX connections using a circuit mode basic service and the supplementary service User-to-User Signalling (service 3) of a public ISDN at the same time.

In order to connect a Private Integrated Services Network Exchange (PINX) to another PINX, mapping functions are required to adapt the specific interfaces at the C reference point to the application at the Q reference point. As such, mapping functions provide for physical adaptation to the interface at the C reference point. Mapping functions also provide for the mapping of user channels and signalling information at the Q reference point to the appropriate channels or timeslots at the C reference point.

The C and Q reference points are defined in ISO/IEC 11579-1.

At the Q reference point the mappings provide a 64 kbit/s service for user channels and a packet mode service for the signalling channel. Bearer conditioning is outside the scope of this International Standard, except for providing the layer 2 for the signalling channel at the Q reference point.

Scenario management is outside the scope of this International Standard.

This International Standard is applicable to PINXs which can be interconnected to form a Private Integrated Services Network (PISN) and which support signalling protocols at the Q reference point.

## 2 Conformance

In order to conform to this International Standard, a PINX shall satisfy the requirements identified in the Implementation Conformance Statement (ICS) 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/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).*

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

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

ITU-T Rec. I.411:1993, *ISDN user-network interfaces — Reference configurations.*

ITU-T Rec. I.430:1995, *Basic user-network interface — Layer 1 specification.*

ITU-T Rec. I.431:1993, *Primary rate user-network interface — Layer 1 specification.*

ITU-T Rec. Q.920:1993, *Digital Subscriber Signalling System No. 1 (DSS1) — ISDN user-network interface data link layer — General aspects.*

## **ISO/IEC 17309:2000(E)**

ITU-T Rec. Q.920 Am. 1:2000, *Amendment 1 to ITU-T Recommendation Q.920.*

ITU-T Rec. Q.921:1997, *ISDN user-network interface — Data link layer specification.*

ITU-T Rec. Q.921 Am. 1:2000, *Amendment 1 to ITU-T Recommendation Q.921.*

ITU-T Rec. Q.931:1998, *ISDN user-network interface layer 3 specification for basic call control.*

ITU-T Rec. Q.957.1:1996, *Stage 3 description for additional information transfer supplementary services using DSS 1: User-to-User Signalling (UUS).*

ETS 300 415:1994, *Private Telecommunication Network (PTN); Terms and definitions.*