INTERNATIONAL STANDARD

ISO/IEC 18017

First edition
2001-11-01

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Mapping functions for the employment of Virtual Private Network scenarios

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseau privé à intégration de services — Fonctions de mappage pour l'emploi de scénarios de réseau privé virtuel

Reference number
ISO/IEC 18017:2001(E)

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

Table of contents

Foreword

ISO (the International Organisation for Standardisation) and IEC (the International Electrotechnical Commission) form the specialised system for world-wide standardisation. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organisation to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organisations, 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 18017 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology,* Subcommittee SC 6, *Telecommunications and information exchange between systems*.

Annex A forms a normative part of this International Standard.

Introduction

This International Standard is one of a series of PISN mapping standards applicable at the C reference point. Mapping standards specify the assignment of interfaces and the multiplexed physical channel within the interface to B-channels at the Q reference point. Figure 1 shows the relationship of this standard to other mapping standards.

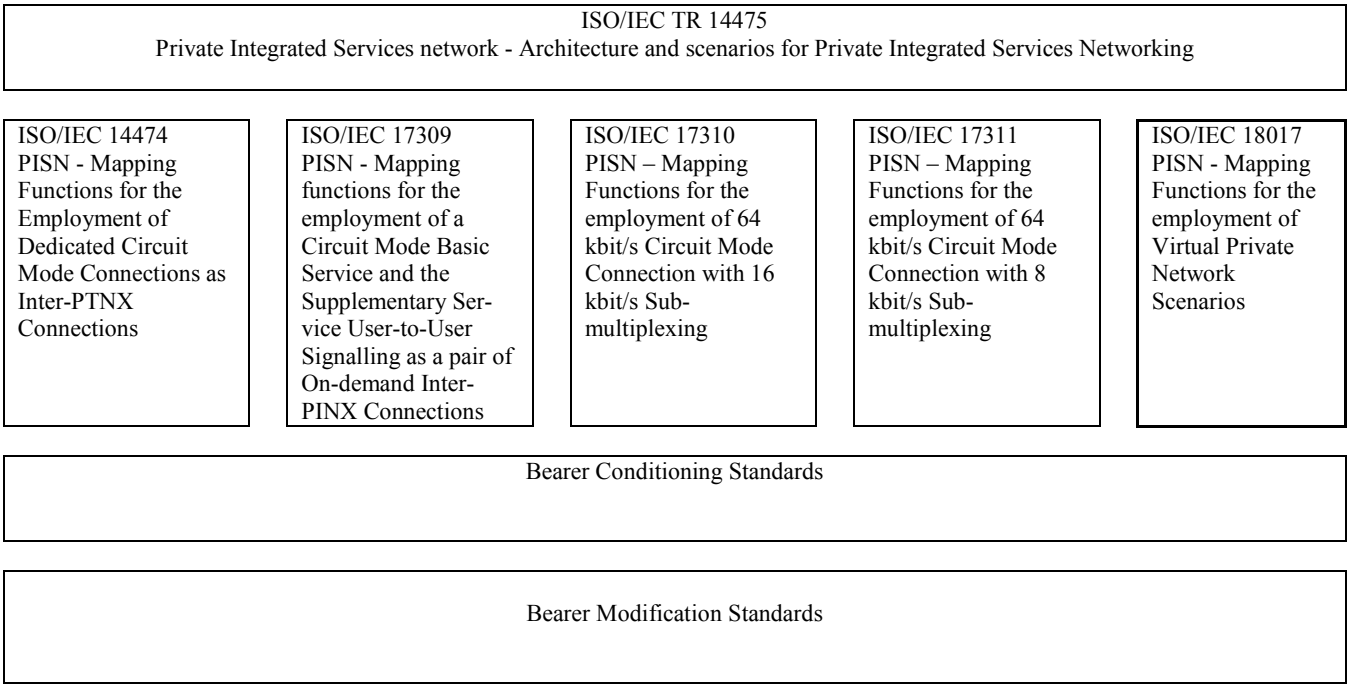

Figure 1 - Structure of PISN Scenario and Mapping standards

Information technology – Telecommunications and information exchange between systems – Private Integrated Services Network – Mapping functions for the employment of Virtual Private Network scenarios

1. Scope

This International Standard defines the mapping functions in exchanges of private integrated services networks (PISN) required for their attachment to Virtual Private Network (VPN) functionality of public (or third party provided) network equipment.

Mapping functions are required to provide for the physical termination of the interface at the C or T reference points, and for the mapping of user channels and signalling information flows at the Q reference point to the appropriate channels or time-slots at the C or T reference point.

At the T reference, point it is assumed that the protocol used on the D channel is the enhanced version of DSS1. These protocol enhancements are given in Annex Q and Annex X of Recommendations Q.931 and Q.932 respectively.

The mapping function specified in this International Standard are applicable to PINXs connected to a VPN that supports either PISN information flows between accesses and/or PISN services.

The C and Q reference points are defined in ISO/IEC 11579-1. The T reference point is defined in ITU-T Rec. I.411.

The types of interfaces at the C or T reference point covered by this International Standard are the ISDN primary rate interface and the basic access interface.

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 TR 14475:2001, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Architecture and scenarios for Private Integrated Services Networking*

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

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

ITU-T Rec. Q.920, Amend 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, Amend 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.932,1998, *Digital subscriber signalling system No. 1 – Generic procedures for the control of ISDN supplementary services*