
**Information technology — Private
integrated services network —**

**Part 3:
Reference configuration for PINX
extension lines**

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Partie 3: Configuration de référence pour lignes d'extension PINX

ISO/IEC 11579-3:1999

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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 part of ISO/IEC 11579 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 11579-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

ISO/IEC 11579 consists of the following parts, under the general title *Information technology — Private integrated services network*:

- Part 1: Reference configuration for PISN Exchanges (PINX)
- Part 2: Reference configuration for HS-PISN Exchanges (HS-PINX)
- Part 3: Reference configuration for PINX extension lines

Annex A of this part of ISO/IEC 11579 is for information only.

Introduction

In general, the PTS infrastructure consists of a series of transceivers, i.e. functional groupings which can perform reception, amplification, regeneration and sending of physical signals presented to them on the extension line. In the simplest case these transceiver functional groupings may be NULL, i.e. the extension line consists of a simple physical wiring.

This International Standard establishes the rules according to which a generic PTS functional grouping can be modelled to match the particular needs of an application, requiring active equipment in the extension line.

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Information technology — Private integrated services network —

Part 3: Reference configuration for PINX extension lines

1 Scope

This part of ISO/IEC 11579 specifies a reference configuration (RC) for the extension line of a private integrated services network exchange (PINX) including high level functions in addition to the physical termination system specified in part 1 of ISO/IEC 11579.

Since such high level functions appear application dependent and can occur, in principle, in any multiplicity and combination, no firm allocation of functional groupings and thus no firm reference points can be indicated. Instead, the principles for combining functional groupings associated with the physical termination system and allocating reference points are specified in this part of ISO/IEC 11579.

Examples for some combinations of functional groupings and the allocation of reference points are given in annex A.

The principle is not intended to require any specific implementation of a PINX, but only to provide guidance for the specification of PINX capabilities.

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The principle is sufficient to support ISDN-like applications. It can be extended to also support non-ISDN-like applications.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 11579. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 11579 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.

ITU-T (formerly: CCITT) Recommendation I.411 (1988), *ISDN-User-Network-Interfaces — Reference Configurations*.

ISO/IEC 11579-1:1994, *Information technology — Telecommunications and information exchange between systems — Private integrated services network — Part 1: Reference configuration for PISN Exchanges*.

3 Symbols and abbreviations

ATM	Asynchronous Transfer Mode
CBR	Constant Bit Rate
CES	Circuit Emulation Service
CF	Control Function
FRP	Fixed Radio Part

IWF	InterWorking Function
MRP	Mobile Radio Part
RC	Reference Configuration
RP	Reference Point
PET	Private Exchange Termination
PLT	Private Line Termination
PNT	Private Network Termination
PINX	Private Integrated Services Network eXchange
PISN	Private Integrated Services Network
PTS	Private Termination System
SW	SWitching
TA	Terminal Adapter
TE	Terminal Equipment
TCF	Transceicer Control Function
TCVR	TransCeivER functional grouping
TE2	Terminal Equipment type 2

4 Definitions

For the purposes of this part of ISO/IEC 11579, the following definitions apply.

4.1

extension line

the circuit interconnecting the terminal equipment with the PINX, thereby bridging the distance between the terminal and the centralized SW function

NOTE Depending on implementation, the extension line can be part of the PTS or the PTS can be attached to the extension line at one of its ends.

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4.2

terminal equipment

See [2]

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4.3

transceiver

a functional grouping which can perform the reception, amplification, regeneration, multiplexing, demultiplexing and sending of physical signals presented to it on the extension line

5 PINX extension line reference configuration

The extension line reference configuration for a PINX provides for a private termination system (PTS), as specified in part 1 of ISO/IEC 11579, and may include High Level applications on top of the PTS infrastructure, as appropriate for the functions to be performed on the extension line, see Figure 1.

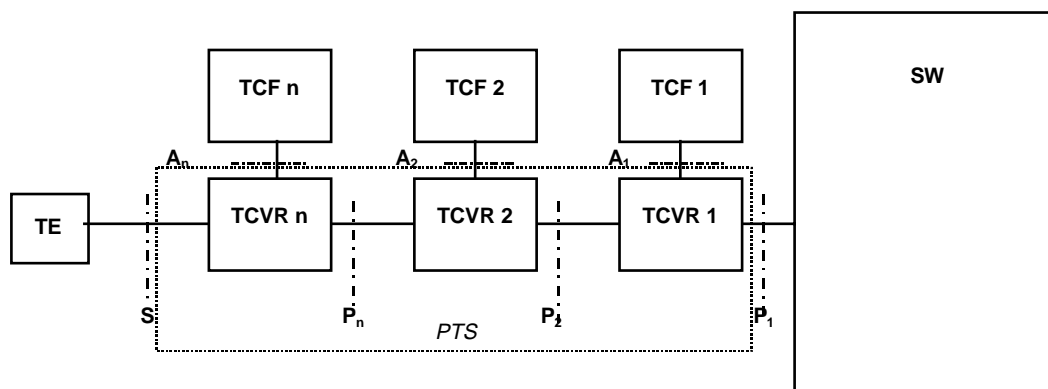


Figure 1 — Extension line reference configuration

5.1 Transceivers

In general, the PTS infrastructure consists of a series of transceivers (TCVR), i.e. functional groupings which can perform reception, amplification, regeneration and sending of physical signals presented to them on the extension line, in either direction of transmission. The number of transceivers can vary from 0 to any sensible number. The transceivers may act in a standalone manner or may act as a pair.

If multiple instances of transceivers need to be modelled, they shall be interconnected via multiple instances of P reference point, the individual instances being distinguished by appropriate indexes.

NOTE Examples of the various applications of the reference configuration are given in annex A.

5.2 Transceiver Control Function functional groupings

The individual transceivers can be under the control of transceiver control functions functional groupings (TCF). TCFS are outside the PTS functional grouping.

TCFs shall be connected to their corresponding transceivers via an instance of A reference point. If multiple instances of TCFS need to be modelled, each of them shall be connected to its TCVR via its own instance of A reference point, the individual instances being distinguished by appropriate indexes.

TCFs can communicate with other TCFS or with high level functions on the TE or on the SW. TCFS can take a specific name, depending on the particular application they support.

Non-TCF High Level entities are outside the scope of this part of ISO/IEC 11579 and are not shown in Figure 1, but are shown in annex A for better understanding of the overall context.

6 Reference points (RP)

A letter has been allocated to that reference point which is the subject of this part of ISO/IEC 11579.

6.1 A reference point

The A reference point defines the boundary between a transceiver functional grouping of the PTS and its TCF functional grouping.

Depending on the implementation, a physical interface can exist at the A reference point. If applicable, its physical, electrical and procedural characteristics shall be specified at the A reference point.