



Standard ECMA-289
2nd Edition - September 2000

Standardizing Information and Communication Systems

**Private Integrated Services Network
(PISN) -
Mapping Functions for the
Employment of 64 kbit/s Circuit Mode
Connections with 8 kbit/s
Sub-Multiplexing**

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(Mapping/8)

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Brief History

This Standard is one of a series of standards defining mapping functions in exchanges of Private Integrated Services Networks. 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 Standard specifies mapping functions for the type of scenario where two PINXs are interconnected via a 64 kbit/s circuit mode connection with 8 kbit/s sub-multiplexing.

This 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.

Compared to the 1st Edition of Standard ECMA-289 (published by ECMA in June 1999), this 2nd Edition incorporates changes to achieve complete alignment with International Standard ISO/IEC 17311:2000(E) published by ISO/IEC in September 2000.

Adopted as 2nd Edition of Standard ECMA-289 by the General Assembly in September 2000.



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1 Scope

This Standard defines the mapping functions in exchanges of Private Integrated Services Networks (PISNs) required for the utilization of scenarios in which 64 kbit/s circuit mode connections are sub-multiplexed into one 16 kbit/s channel for carrying inter-PINX signalling and 6 x 8 kbit/s channels for carrying inter-PINX user information.

NOTE 1

This Standard has been prepared to meet the specific needs of an application for a particular user organisation. However, it may also be applicable elsewhere.

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 ECMA-133.

The type of interface at the C reference point covered by this Standard is the 64 kbit/s Unrestricted Digital Leased Line (D64U) Terminal Equipment Interface, in accordance with ITU-T Rec. G.703.

At the Q reference point the mapping provides an 8 kbit/s service for user channels to support the transfer of unrestricted digital information and to support the transfer of speech, and a 16 kbit/s packet mode service for the signalling channel. The applied mapping is a static mapping, i.e. there is a fixed relationship between user and signalling channels at the Q reference point and the interface at the C reference point.

Management functions relating to failure management are outside the scope of this Standard.

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

2 Conformance

In order to conform to this Standard, a PINX shall satisfy the requirements identified in the Implementation Conformance Statement (ICS) proforma in annex A.

3 References (normative)

The following standards contain provisions which, through reference in this text, constitute provision of this Standard. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

In the case of references to ECMA Standards that are aligned with ISO/IEC International Standards, the number of the appropriate ISO/IEC International Standard is given in brackets after the ECMA reference.

ECMA-133	Private Integrated Services Network (PISN) - Reference Configuration for PISN Exchanges (PINX) (International Standard ISO/IEC 11579-1)
ITU-T Rec. G.703	Physical/electrical characteristics of hierarchical digital interfaces (1998)
ITU-T Rec. I.112	Vocabulary of terms for ISDNs (1993)
ITU-T Rec. I.460	Multiplexing, rate adaption and support of existing interfaces (1999)
ITU-T Rec. Q.920	Digital Subscriber Signalling System No. 1 (DSS1) - ISDN user-network interface data link layer - General aspects (1993)
ITU-T Rec. Q.920 Am. 1	Amendment 1 to ITU-T Recommendation Q.920 (2000)
ITU-T Rec. Q.921	ISDN user-network interface - Data link layer specification (1997)
ITU-T Rec. Q.921 Am. 1	Amendment 1 to ITU-T Recommendation Q.921 (2000)