

ECMA

Standardizing Information and Communication Systems

Private Integrated Services Network (PISN) - Mapping Functions for the Employment of Dedicated Circuit Mode Connections as Inter-PINX Connections

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(MAPPING-CM-STATIC)

AVVA Documents

Brief History

This Standard is one of a series of ECMA 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.

This Standard specifies mapping functions for the type of scenario where two PINXs are interconnected via Dedicated Transmission Systems and/or Cross Connect Systems.

The 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.

This ECMA Standard has been adopted by the ECMA General Assembly of June 1995.

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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 intervening network (IVN) scenarios which provide dedicated circuit mode connections for carrying inter-PINX signalling and user information.

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.

The types of interfaces at the C reference point covered by this Standard are:

- 1) 2048 kbit/s Primary Rate User-Network Layer 1 Interface, in accordance with ETS 300 011 including the requirements for the "Application of the ETS 300 011 for PTNX interconnections" as contained in ETS 300 011 Annex A
- 2) Basic User-Network Layer 1 Interface, in accordance with ETS 300 012, excluding the point-to-multipoint mode of operation
- 3) 2048 kbit/s Digital Structured Leased Line (D2048S); Terminal Equipment Interface, in accordance with ETS 300 420
- 4) 2048 kbit/s Digital Unstructured Leased Line (D2048U); Terminal Equipment Interface, in accordance with ETS 300 248
- 5) 64 kbit/s Unrestricted Digital Leased Line (D64U); Terminal Equipment Interface, in accordance with ETS 300 290

The IVN can be a dedicated transmission system or a cross connect system. IVNs which include inverse multiplexer techniques (e.g. channel aggregation in accordance with ISO/IEC 13871) are covered by this Standard as far as they support one of the interfaces listed above.

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 Standard, except for deriving 64 kbit/s channels and for providing the services of layer 2 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 timeslots of the interface at the C reference point; any changes are subject to administrative actions.

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

This 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 Standard, a PINX shall satisfy the requirements identified in the Implementation Conformance Statement (ICS) proforma in annex A.

3 References

ETS 300 011	Integrated Services Digital Network (ISDN); Primary rate user-network interface: Layer 1 specification and test principles (1992)
ETS 300 012	Integrated Services Digital Network (ISDN); Basic user-network interface: Layer 1 specification and test principles (1992)
ETS 300 248	Business Telecommunications (BT); Open Network Provision (ONP) technical requirements; 2048 kbit/s digital unstructured leased line (D2048U) - Terminal equipment interface (1993)