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**Zasebno omrežje z integriranimi storitvami (PISN) - Medcentralni signalizacijski protokol - Dopolnilna storitev: tvorba zahteve za zvezo**

Private Integrated Services Network (PISN); Inter-exchange Signalling Protocol; Make Call Request supplementary service

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# ETSI TS 102 257 V1.1.1 (2003-08)

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*Technical Specification*

## **Private Integrated Services Network (PISN); Inter-exchange Signalling Protocol; Make Call Request supplementary service**

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## Reference

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## Keywords

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## Foreword

This Technical Specification (TS) has been produced by ECMA on behalf of its members and those of the European Telecommunications Standards Institute (ETSI).

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## Brief History

The present document is one of a series of ECMA Standards defining services and signalling protocols applicable to Private Integrated Services Networks (PISNs). The series uses ISDN concepts as developed by ITU-T and conforms to the framework of International Standards for Open Systems Interconnection as defined by ISO/IEC. It has been produced under ETSI work item DTS/ECMA-00232.

The present document specifies the signalling protocol for use at the Q reference point in support of the Make Call Request supplementary service. The protocol defined in the present document forms part of the PSS1 protocol (informally known as QSIG).

The present document 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.



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## 1 Scope

The present document specifies the signalling protocol for the support of the Supplementary Service Make Call Request (SS-MCR) at the Q reference point between Private Integrated services Network eXchanges (PINXs) connected together within a Private Integrated Services Network (PISN).

Supplementary service MCR enables a Requesting User to request a Co-operating User to establish a new Requested Call to a Destination User. This new Requested Call between the Co-operating and Destination User can be either a Basic call or a Call Independent Signalling Connection.

The Q reference point is defined in ECMA-133 [1].

Service specifications are produced in three stages and according to the method specified in ETS 300 387 [6]. The present document contains the stage 3 specification for the Q reference point and satisfies the requirements identified by the stage 1 and stage 2 specifications in ECMA-343 [4].

The signalling protocol for SS-MCR operates on top of the signalling protocol for basic circuit switched call control, as specified in ECMA-143 [2], and uses certain aspects of the generic procedures for the control of supplementary services specified in ECMA-165 [3].

The present document also specifies additional signalling protocol requirements for the support of interactions at the Q reference point between SS-MCR and other supplementary services and ANFs.

The present document is applicable to PINXs, which can interconnect to form a PISN.

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## 2 Conformance

In order to conform to the present document, a PINX shall satisfy the requirements identified in the Protocol Implementation Conformance Statement (PICS) proforma in annex A.

Conformance to the present document includes conforming to those clauses that specify protocol interactions between SS-MCR and other supplementary services and ANFs for which signalling protocols at the Q reference point are supported in accordance with the stage 3 standards concerned.

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## 3 References (normative)

The following standards contain provisions, which, through reference in this text, constitute provisions of the present document. All standards are subject to revision, and parties to agreements based on the present document 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.

- [1] ECMA-133: "Private Integrated Services Network (PISN) - Reference Configuration for PISN Exchanges (PINX)", (International Standard ISO/IEC 11579-1).
- [2] ECMA-143: "Private Integrated Services Network (PISN) - Circuit Mode Bearer Services - Inter-Exchange Signalling Procedures and Protocol (QSIG-BC)", (International Standard ISO/IEC 11572).
- [3] ECMA-165: "Private Integrated Services Network (PISN) - Generic Functional Protocol for the Support of Supplementary Services - Inter-Exchange Signalling Procedures and Protocol (QSIG-GF)", (International Standard ISO/IEC 11582).
- [4] ECMA-343: "Private Integrated Services Network (PISN) - Specification, Functional Model and Information Flows - Make Call Request Supplementary Service (MCRSD)".
- [5] ECMA-345: "Private Integrated Services Network (PISN) - Use of QSIG for Message Centre Access (MCA) Profile Standard".

- [6] ETSI ETS 300 387: "Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services".
- [7] ITU-T Recommendation I.112: "Vocabulary of terms for ISDNs".
- [8] ITU-T Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [9] ITU-T Recommendation Q.950: "Digital Subscriber Signalling System No. 1 (DSS1) - Supplementary services protocols, structure and general principles".
- [10] ITU-T Recommendation Z.100: "Specification and Description Language (SDL)".

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## 4 Definitions

For the purposes of the present document, the following terms and definitions apply.

### 4.1 External definitions

The present document uses the following terms and definitions given in other documents apply:

**Application Protocol Data Unit (APDU):** See ECMA-165 [3].

**call, basic call:** See ECMA-165 [3].

**Call Independent Signalling Connection (CISC):** See ECMA-165 [3].

**call-independent:** See ECMA-165 [3].

**gateway PINX:** See ECMA-165 [3].

**originating PINX:** See ECMA-165 [3].

**Private Integrated Services Network (PISN):** See ECMA-133 [1].

**Private Integrated services Network eXchange (PINX):** See ECMA-133 [1].

**signalling:** See ITU-T Recommendation I.112 [7].

**Supplementary Service (SS):** See ITU-T Recommendation I.210 [8].

**Supplementary Service Control (SSC) entity:** See ECMA-165 [3].

**terminating PINX:** See ECMA-165 [3].

**transit PINX:** See ECMA-165 [3].

### 4.2 Other definitions

#### 4.2.1 Co-operating PINX

The PINX where the Co-operating User is located.

#### 4.2.2 Co-operating User

The user who receives a Make Call Request and who shall set up a new Requested Call to the Destination User.

#### 4.2.3 Destination PINX

The PINX where the Destination User is located.

#### 4.2.4 Destination User

The called user of the Requested Call i.e. the user to whom the Co-operating User shall establish a Requested Call.

#### 4.2.5 Make Call Request

A request from the Requesting User for a new call (i.e. Requested Call) between a Co-operating User and a Destination User.

#### 4.2.6 Original Call

The call between the Requesting User and the Co-operating User. The Original Call can be either a Basic call or a Call Independent Signalling Connection and is correlated with the Requested Call.

#### 4.2.7 Requested Call

The call between the Co-operating User and the Destination User that is established by the Co-operating User due to a Make Call Request from the Requesting User. The Requested Call can either be a Basic call (with a specific Basic Service) or a Call Independent Signalling Connection and is correlated with the Original Call.

#### 4.2.8 Requesting PINX

The PINX where the Requesting User is located.

#### 4.2.9 Requesting User

The User who sends a Make Call Request to the Co-operating User with the request to establish a specific Requested Call to the Destination User.

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## 5 List of acronyms

For the purposes of the present document the following acronyms apply:

ANF	Additional Network Feature
ANF-CIDL	Call Identification and Call Linkage
ANF-PR	Path Replacement
ANF-PUMI	Private User Mobility Incoming Call
ANF-PUMO	Private User Mobility Outgoing Call
ANF-RRC	Route Restriction Class
ANF-TC	Transit Counter
APDU	Application Protocol Data Unit
ASN.1	Abstract Syntax Notation One
CISC	Call Independent Signalling Connection
ISDN	Integrated Services Digital Network
NFE	Network Facility Extension
PICS	Protocol Implementation Conformance Statement
PINX	Private Integrated services Network eXchange
PISN	Private Integrated Services Network
SDL	Specification and Description Language
SS	Supplementary Service
SS-AOC	Advice of Charge
SS-CCBS	Completion of Calls to Busy Subscribers
SS-CCNR	Completion of Calls on No Reply
SS-CD	Call Deflection
SS-CFB	Call Forwarding Busy
SS-CFNR	Call Forwarding No Reply
SS-CFU	Call Forwarding Unconditional

SS-CI	Call Intrusion
SS-CINT	Call INTerception
SS-CLIP	Calling Line Identification Presentation
SS-CLIR	Calling/Connected Line Identification Restriction
SS-CMN	Common Information
SS-CNIP	Calling Name Identification Presentation
SS-CNIR	Calling/Connected Name Identification Restriction
SS-CO	Call Offer
SS-COLP	Connected Line Identification Presentation
SS-CONP	Connected Name Identification Presentation
SS-CPI(P)	Call Priority Interruption (Protection)
SS-CT	Call Transfer
SS-DND	Do Not Disturb
SS-DNDO	Do Not Disturb Override
SS-MCR	Make Call Request
SS-MID	Mailbox Identification
SS-MWI	Message Waiting Indication
SS-PUMR	Private User Mobility Registration
SS-RE	REcall
SS-SD	Simple Dialog
SS-SMS	Short Message Service
SS-SSCT	Single Step Call Transfer
SS-WTAN	Wireless Terminal Authentication of the PISN
SS-WTAT	Wireless Terminal Authentication of a WTM User
SS-WTLR	Wireless Terminal Location Registration
SS-WTMI	Wireless Terminal Incoming Call
SS-WTMO	Wireless Terminal Outgoing Call

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## 6 Signalling Protocol for the support of SS-MCR

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### 6.1 SS-MCR description [/sist-ts-etsi-ts-102-257-v1-1-1-2005](https://standards.itech.ai/catalog/standards/sist-ts-etsi-ts-102-257-v1-1-1-2005)

The supplementary service MCR enables a Requesting User to request a Co-operating User to establish a new Requested Call to a Destination User. This new Requested Call between the Co-operating User and the Destination User can either be a Basic call or a Call Independent Signalling Connection. The new Requested Call is correlated to the Original Call between the Requesting and Co-operating User.

### 6.2 SS-MCR operational requirements

#### 6.2.1 Requirements on a Requesting PINX

Call establishment procedures for the incoming and outgoing side of an inter-PINX link and call release procedures, as specified in ECMA-143 [2], shall apply.

Generic procedures for call-related control of supplementary services, as specified in ECMA-165 [3] for an End PINX, shall apply.

Generic procedures for the call-independent control (connection-oriented) of supplementary services, as specified in ECMA-165 [3] for an Originating PINX and for a Terminating PINX, shall apply.

#### 6.2.2 Requirements on a Co-operating PINX

Call establishment procedures for the incoming and outgoing side of an inter-PINX link and call release procedures, as specified in ECMA-143 [2], shall apply.

Generic procedures for call-related control of supplementary services, as specified in ECMA-165 [3] for an End PINX, shall apply.