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Zasebno omrežje z integriranimi storitvami (PISN) - Specifikacija, funkcijski model in informacijski pretoki - Dopolnilna storitev: tvorba zahteve za zvezo

Private Integrated Services Network (PISN); Specification, functional model and information flows; Make Call Request supplementary service

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Technical Specification

Private Integrated Services Network (PISN); Specification, functional model and information flows; Make Call Request supplementary service

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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).

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-00231.

The present document specifies the Make Call Request supplementary service.

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.

1 Scope

The present document specifies Supplementary Service Make Call Request (SS-MCR), which is related, but not limited, to various basic services supported by Private Integrated Services Networks (PISNs). Basic services are specified in ECMA-142 [2].

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 and Destination User can be either a Basic call or call independent signalling connection.

Service specifications are produced in three stages, according to the method described in ETS 300 387 [4]. The present document contains the stage 1 and stage 2 specifications of SS-MCR. The stage 1 specification (clause 6) specifies the supplementary service as seen by users of PISNs. The stage 2 specification (clause 7) specifies the functional entities involved in the supplementary service and the information flows between them.

2 Conformance

In order to conform to the present document, a stage 3 standard shall specify signalling protocols and equipment behaviour that are capable of being used in a PISN which supports the supplementary service specified in the present document. This means that, to claim conformance, a stage 3 standard is required to be adequate for the support of those aspects of clause 6 (stage 1) and clause 7 (stage 2) which are relevant to the interface or equipment to which the stage 3 standard applies.

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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-142: "Private Integrated Services Network (PISN) - Circuit Mode 64kbit/s Bearer Services - Service Description, Functional Capabilities and Information Flows (BCSD) (International Standard ISO/IEC 11574)".
- [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] ETSI ETS 300 387: "Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services".
- [5] ITU-T Recommendation I.112: "Vocabulary of terms for ISDNs".
- [6] ITU-T Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [7] ITU-T Recommendation Z.100: "Specification and Description Language (SDL)".

4 Definitions

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

4.1 External definitions

For the purposes of the present document the following terms and definitions given in other documents apply:

basic service: See ECMA-142 [2].

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

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

call independent: See ECMA-165 [3].

call related: See ECMA-165 [3].

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

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

service: See ITU-T Recommendation I.112 [5].

signalling: See ITU-T Recommendation I.112 [5].

Supplementary Service (SS): See ITU-T Recommendation I.210 [6].

user: See ECMA-142 [2].

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4.2 Other definitions

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4.2.1 Co-operating User

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

4.2.2 Destination User

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

4.2.3 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.

4.2.4 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.

4.2.5 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.

4.2.6 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.

5 List of acronyms

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

ANF	Additional Network Feature
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
CISC	Call Independent Signalling Connection
FE	Functional Entity
ISDN	Integrated Services Digital Network
MC	Message Centre
MCR	Make Call Request
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-MCM	Message Centre Monitoring
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

6 SS-MCR stage 1 specification

6.1 Description

6.1.1 General description

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 shall be correlated to the Original Call between the Requesting User and the Co-operating User.

6.1.2 Qualifications on applicability to telecommunication services

This supplementary service is applicable to all basic telecommunication services.

6.2 Procedures

6.2.1 Provision / withdrawal

SS-MCR may be provided or withdrawn after pre-arrangement with the service provider or may be generally available to all users.

6.2.2 Normal procedures

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6.2.2.1 Activation, deactivation and interrogation

Not applicable.

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6.2.2.2 Invocation and operation

A Requesting User may use SS-MCR to request the set up of a new Requested Call between a Co-operating User and a Destination User.

NOTE: The Requesting User and the Destination User can be the same user (e.g. Requesting/Destination User is a Message Centre).

To invoke SS-MCR the Requesting User may use, if available, an existing signalling connection (either call-related or call-independent) with the Co-operating User, otherwise the Requesting User shall establish a call independent signalling connection to the Co-operating User in order to convey the following information:

- address information of the Destination User (e.g. Party Number);
- optionally, number information of the Co-operating User (e.g. Party Number);
- optionally, number information of the Requesting User (e.g. Party Number);
- an indication for a Basic Service, if a Basic call is requested, otherwise an indication for a call independent signalling connection;
- a correlation ID for the Original Call and the Requested Call;
- an indication whether to retain the Original Call after successful establishment of the Requested Call.

If the entity serving the Co-operating User supports SS-MCR, this entity may check whether the Requesting User is allowed to invoke SS-MCR and if a call independent signalling connection or a Basic call with the indicated Bearer Service can be established. Afterwards, the Co-operating User may be informed about the SS-MCR request. The

Requested Call shall be either a Basic call with the requested Basic Service or a call independent signalling connection, due to the received request. Additionally the following information shall be sent to the Destination User:

- address information of the Requesting User and Co-operating User (i.e. Party Number of the Requesting User) if received;
- a correlation ID for the Original Call and the Requested Call.

If the Requested Call is successfully established, an appropriate indication shall be sent to the Requesting User. The Original Call shall be retained or cleared immediately after successful establishment of the Requested Call dependent on the corresponding indication received in the initial Make Call Request from the Requesting User. The Co-operating User is responsible for clearing of the Requested Call. In case of retention of the Original Call the Requesting User is responsible for clearing of the Original Call to the Co-operating User.

6.2.3 Exceptional procedures

6.2.3.1 Activation, deactivation and interrogation

Not applicable.

6.2.3.2 Invocation and operation

If the entity serving the Co-operating User does not support SS-MCR or if the validation of the request from the Requesting user fails or a call independent signalling connection or a Basic call with the indicated Basic Service cannot be established, an appropriate error indication shall be sent to the Requesting User. The Requesting User is responsible for clearing of the Original Call.

If the Co-operating User is busy when SS-MCR is invoked, an appropriate error indication shall be sent to the Requesting User. The Requesting User is responsible for clearing the Original Call.

6.3 Interactions with other Supplementary Services / Additional Network Features

Interactions with other supplementary services and ANFs for which PISN standards were available at the time of publication of the present document are specified below.

6.3.1 Calling Line Identification Presentation (SS-CLIP)

No interaction.

6.3.2 Connected Line Identification Presentation (SS-COLP)

No interaction.

6.3.3 Calling/Connected Line Identification Restriction (SS-CLIR)

No interaction.

6.3.4 Calling Name Identification Presentation (SS-CNIP)

No interaction.

6.3.5 Calling/Connected Name Identification Restriction (SS-CNIR)

No interaction.