

**Private Integrated Services Network (PISN);
Service profiles of mobile PISN users;
General requirements**



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Foreword

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

1 Scope

In order that a mobile user can be offered a consistent class of service at any visited Private Integrated Services Network Exchange (PINX) within the user's home Private Integrated Services Network (PISN), it may be necessary that details of the capabilities and restrictions applied to the user, the service profile, are passed between PINXs in a standardized format. The present document provides a list of items of information which can be transferred between PINXs in order that a user may be given as similar a range of services at a visited PINX as would be received at the Home PINX. It also specifies the format of the information when transferred from one PINX to another. The service profile can contain static information regarding the capabilities assigned to the user as well as dynamic information indicating the activation status of a service where this is applicable.

Services considered are restricted primarily to those which have been standardized by ETSI as PISN supplementary services and Additional Network Features (ANF). In addition, some non-standardized services that are considered to be of great importance in the operation of a PISN (such as Call Barring) are also included. Other non-standardized services are identified in the informative annex A.

The present document should be considered in conjunction with the stage 2 standard for Additional Network Feature, Transfer of Service Profile (ANF-CTSP), ETS 300 692 [12]. Conformance to the present document is met by conforming to a stage 3 ETS which fulfils the requirements of the present document that are relevant to the equipment for which the stage 3 ETS applies. Therefore, no method of testing is provided for the present document.

NOTE: The implementation of ANF-CTSP and the present document does not guarantee the availability or similarity of operation of individual supplementary services at different Visited PINXs. It is the responsibility of a PISN administrator to ensure that a workable solution is implemented in the PISN.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] ETSI EN 300 171 (1997): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Control aspects of circuit-mode basic services [ISO/IEC 11574 (1994) modified]".
- [2] ETSI ETS 300 173 (1996): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Identification supplementary services".
- [3] ETSI ETS 300 237 (1996): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Name identification supplementary services".
- [4] ETSI ETS 300 256 (1996): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Diversion supplementary services".
- [5] ETSI ETS 300 260 (1996): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Call transfer supplementary service".
- [6] ETSI ETS 300 361 (1994): "Private Telecommunication Network (PTN); Specification, functional models and information flows; Call offer supplementary service".
- [7] ETSI ETS 300 363 (1994): "Private Telecommunication Network (PTN); Specification, functional models and information flows; Do not disturb and do not disturb override supplementary services".
- [8] ETSI ETS 300 365 (1996): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Call completion supplementary services".

- [9] ETSI ETS 300 425 (1995): "Private Telecommunication Network (PTN); Specification, functional models and information flows; Call intrusion supplementary service".
- [10] ETSI ETS 300 415 (1996): "Private Integrated Services Network (PISN); Terms and definitions".
- [11] ETSI ETS 300 691 (1996): "Private Integrated Services Network (PISN); Cordless Terminal Mobility (CTM); Location handling services; Service description".
- [12] ETSI ETS 300 692 (1996): "Private Integrated Services Network (PISN); Cordless Terminal Mobility (CTM); Location handling services; Functional capabilities and information flows".
- [13] ETSI I-ETS 300 768 (1997): "Private Integrated Services Network (PISN); Cordless Terminal Mobility (CTM); Authentication; Service description".
- [14] ETSI EN 301 254 (1998): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Advice of Charge (AoC) supplementary services [ISO/IEC 15049 (1997), modified]".
- [15] ETSI EN 301 255 (1998): "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Message Waiting Indication (MWI) supplementary service [ISO/IEC 15506 (1997), modified]".
- [16] ETSI EN 301 256 (1998): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Call interception additional network feature [ISO/IEC 15053 (1997), modified]".
- [17] ETSI EN 301 257 (1998): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Recall supplementary service [ISO/IEC 15051 (1997), modified]".
- [18] ECMA-263 (1997): "Private Integrated Services Network (PISN) - Specification, Functional Model and Information Flows - Call Priority Interruption and Call Priority Interruption Protection Supplementary Services".
- [19] ECMA-281 (1999): "Private Integrated Services Network (PISN) - Specification, Functional Model and Information Flows - Private User Mobility (PUM) - Registration Supplementary Service".
- [20] ITU-T Recommendation E.164 (1992): "The international public telecommunication numbering plan".
- [21] ITU-T Recommendation I.210 (1993): "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [22] ISO/IEC 11579-1 (1994): "Information technology - Telecommunications and information exchange between systems - Private integrated services network - Part 1: Reference configuration for PISN Exchanges (PINX)".
- [23] ISO/IEC 11571 (1994): "Information technology - Telecommunications and information exchange between systems - Private Integrated Services Networks - Addressing".

3 Definitions and abbreviations

3.1 Definitions

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

account codes: supplementary service that allows or enforces the served user to identify each outgoing call with a multi-digit code representing an accounting division (for example, customer, project or departmental codes). This code can then be used for accounting and billing purposes

add-on conference: supplementary service that permits a user to have simultaneous communication with two or more other users

additional Network Feature: see ETS 300 415 [10]

advice of charge: see EN 301 254 [14]

call (Basic call): see EN 300 171 [1]

call barring: Additional Network Feature (ANF) that allows the possibility of preventing the connecting together of certain PISN users and/or accesses to other networks

call deflection: service that permits the served user, on arrival of an incoming call, to request that the PISN divert the call to another destination

call distribution: supplementary service that allows the formation of distribution groups, whereby calls addressed to a distribution group are distributed between the individual users of that group according to some algorithm

call forwarding on busy: see ETS 300 256 [4]

call forwarding on no reply: see ETS 300 256 [4]

call forwarding unconditional: see ETS 300 256 [4]

call hold: supplementary service that allows a user to interrupt communications on an existing call and then subsequently, if desired, to re-establish communications

call interception: see EN 301 256 [16]

call intrusion: see ETS 300 425 [9]

call offer: see ETS 300 361 [6]

call park: supplementary service that allows the served user to place a call on hold such that it can be picked up by another authorized user, e.g. a paged user

call pick-up: supplementary service that allows a call which is alerting or parked at a user to be answered by a different, authorized, user

call priority interruption: see ECMA-263 [18]

call priority interruption protection: see ECMA-263 [18]

call shuttle: supplementary service that allows the served user to connect alternatively to two other users without forming a conference type connection. The user that is not in conversation is on hold

call transfer: see ETS 300 260 [5]

call waiting: supplementary service that permits the served user to be notified of an incoming call with an indication that no access information channel is available, and to then have the choice of accepting, rejecting or ignoring the waiting call

calling line identification presentation: see ETS 300 173 [2]

calling name identification presentation: see ETS 300 237 [3]

calling/connected line identification restriction: see ETS 300 173 [2]

calling/connected name identification restriction: see ETS 300 237 [3]

closed user group: supplementary service that enables users to form groups to and from which access is restricted

common use abbreviated dialling: supplementary service that allows short key sequences to be assigned to longer destination numbers commonly used by a group of PISN users and for the longer number to be sent out when the short sequence is entered by a user

completion of call on no reply: see ETS 300 365 [8]

completion of call to a busy subscriber: see ETS 300 365 [8]

conference type connection: see ETS 300 425 [9]

connected line identification presentation: see ETS 300 173 [2]

connected name identification presentation: see ETS 300 237 [3]

controlled diversion consult: supplementary service that is offered to the calling PISN user and grants that user the possibility of being consulted on encountering diversion (call forwarding or call deflection)

controlled diversion immediate: supplementary service that is offered to the calling PISN user and grants that user the possibility of immediately overriding all diversions (call forwarding or call deflection) encountered

Cordless Terminal Mobility (CTM): ability of a cordless terminal to be in continuous motion whilst accessing and using the telecommunications services offered by the PISN as well as the capability of the network to keep track of the location of the cordless terminal within the coverage area of the radio system used

CTM authentication of the network: see I-ETS 300 768 [13]

CTM authentication of the terminal: see I-ETS 300 768 [13]

CTM Location registration: see ETS 300 691 [11]

do not disturb override: see ETS 300 363 [7]

do not disturb: see ETS 300 363 [7]

in-call modification: supplementary service that enables a user to change within an active call from one set of capabilities, as characterized by bearer capability, low layer compatibility and high layer compatibility information, to another set of capabilities without releasing the end-to-end connection

last number redial: supplementary service that enables the served user to enter a short key sequence to cause the last number dialled by the user to be sent out

location area: coverage area in which a cordless terminal may receive and make calls as a result of a single location registration

location registration: process whereby the position of a cordless terminal is made known to the PISN

malicious call identification: supplementary service that enables a user to request that the source of an incoming call be identified and registered in the network

message waiting indication: see EN 301 255 [15]

mobile user: PISN user who has access to one or both of the CTM service and the PUM service

Night mode: condition where a PISN number is known by the PISN to be unattended and therefore cannot accept incoming calls. There may be an arrangement for calls to be redirected to a night answer point during night mode

night service: When night mode is activated, supplementary service that allows all incoming calls to the served user to be given one of the following treatments, depending on implementation and/or user requirements:

- reject the call, with an indication to the calling user that night mode has been encountered;
- attempt to forward the call to a night answer point, indicating to the calling user and the forwarded to user that night mode has been encountered.

personal abbreviated dialling: supplementary service that allows the served user to assign short key sequences to longer destination numbers and for the longer number to be sent out when the short sequence is entered by the user

PISN Number: see ISO/IEC 11571 [23]

Private Integrated Services Network: see ISO/IEC 11579-1 [22]

Private User Mobility (PUM): capability of a PISN user to register at any PISN terminal and so receive the PISN services at the hosting terminal

PUM registration: see ECMA-281 [19]

PUM user: for the purpose of the present document, a PUM user is defined as the user of the SS-PUMR supplementary service

recall: see EN 301 257 [17]

saved number redial: supplementary service that enables the served user to request that the last destination number entered is stored. This number is sent out whenever requested by the user

serial call: supplementary service that allows the served user, prior to or at the time of invoking call transfer, can indicate that the call about to be transferred is to be presented again to the served user when the user to which the call is transferred clears

service profile: specific collection of PISN services and service options which a PISN user can use

supplementary service: see ITU-T Recommendation I.210 [21]

timed reminder: supplementary service that causes the served user to be alerted at a time and/or date previously specified by the served user or another authorized user

user-to-user signalling: supplementary service that allows a user to send/receive a limited amount of information to/from another user over the signalling channel in association with a call to the other user

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ANF	Additional Network Feature
AOC-D, SS-AOC-D	Advice Of Charge During call
AOC-E, SS-AOC-E	Advice Of Charge at End of call
AOC-S, SS-AOC-S	Advice Of Charge at Start of call
CCBS, SS-CCBS	Completion of Call to a Busy Subscriber
CCNR, SS-CCNR	Completion of Call on No Reply
CD, SS-CD	Call Deflection
CDIVC, SS-CDIVC	Controlled Diversion Consult
CDIVI, SS-CDIVI	Controlled Diversion Immediate
CFB, SS-CFB	Call Forwarding on Busy
CFNR, SS-CFNR	Call Forwarding on No Reply
CFU, SS-CFU	Call Forwarding Unconditional
CI, SS-CI	Call Intrusion
CICL	Call Intrusion Capability Level
CINT, ANF-CINT	Call Interception
CIPL	Call Intrusion Protection Level
CLIP, SS-CLIP	Calling Line Identification Presentation
CLIR, SS-CLIR	Calling/Connected Line Identification Restriction

CNIP, SS-CNIP	Calling Name Identification Presentation
CNIR, SS-CNIR	Calling/Connected Name Identification Restriction
CO, SS-CO	Call Offer
COLP, SS-COLP	Connected Line Identification Presentation
CONF, SS-CONF	Add-On Conference
CONP, SS-CONP	Connected Name Identification Presentation
CPK, SS-CPK	Call Park
CPI, SS-CPI	Call Priority Interruption
CPIP, SS-CPIP	Call Priority Interruption Protection
CPU, SS-CPU	Call Pick-Up
CT, SS-CT	Call Transfer
CTAN, SS-CTAN	CTM Authentication of the Network
CTAT, SS-CTAT	CTM Authentication of the Terminal
CTLR, SS-CTLR	CTM Location Registration
CTSP, ANF-CTSP	Transfer of Service Profile
CTM	Cordless Terminal Mobility
CUG, SS-CUG	Closed User Group
CW, SS-CW	Call Waiting
DIST, SS-DIST	Call Distribution
DND, SS-DND	Do-Not-Disturb
DNDO, SS-DNDO	Do-Not-Disturb Override
DNDOCL	Do Not Disturb Override Capability Level
DNDPL	Do Not Disturb Protection Level
HOLD, SS-HOLD	Call Hold
IM, SS-IM	In-call Modification
ISDN	Integrated Services Digital Network
MCID, SS-MCID	Malicious Call Identification
MWI, SS-MWI	Message Waiting Indication
NS, SS-NS	Night Service
PISN	Private Integrated Services Network
PUM	Private User Mobility
PUMR, SS-PUMR	PUM Registration
RE, SS-RE	Recall
SC	Serial Call
UUS	User-to-User Signalling

4 The service profile

For each user in a PISN, information is maintained regarding the services and facilities that are available for the user. This information is referred to as the service profile. The present document specifies the information elements that may be transferred from one PINX to another so that a mobile user's service profile can be re-created at any Visitor PINX at which the user registers. The present document does not specify the content or format of the service profile stored in a PINX.

The information elements specified in tables 2 and 3 may be transmitted individually, per service, or as a complete service profile. As a further alternative, a mobile user may be offered one of a range of fixed, network-defined sets of service capabilities (see table 4). If this is the case, the transmitted service profile shall identify which fixed set of capabilities applies to the mobile user and may specify the activation status of selected services (if applicable) and the user parameters associated with the selected services (if applicable).

The service profile of a mobile user shall specify the following items of information if they are available:

- the user:
 - number;
 - name (including organizational classifications such as Department and Location).
- which optional services are available to the user;
- which optional services are not available to the user;
- which options are enabled for each available service;
- which options can be modified by the user;
- which user-related parameters are selected for each service (e.g. intrusion protection and capability levels);
- the current activation status of the service, if applicable.

NOTE: The service profile does not contain details of user access procedures such as digit strings to be used to invoke the service.

This information is changed infrequently and can be considered to be configuration data. The service profile can also contain user specific information which can be changed by the user or the network to alter the effect of a particular service provided. Examples of such information are:

- call diversion address;
- abbreviated dialling tables;
- call barring details.

For a mobile user to be offered a consistent overall service throughout the PISN it is necessary to make the service profile information available at each PINX visited. The present document identifies data elements necessary to support a full range of services within a PISN.

5 Identification of services

5.1 Overview

The telephony-related functions available within a PISN can be categorized into two separate groups:

- user services: the services that can be selected and used by individuals to enable them to process incoming and outgoing calls according to their own business requirements. Examples of these services are:
 - call diversion;
 - call transfer;
- organizational management services: the services that can be selected and configured for groups and individuals to provide overall management and control of the use of a PISN. Examples of these services are:
 - call barring;
 - common use abbreviated dialling.

5.2 User services

A mobile user's service profile shall contain indications of the availability of the following standardized services which are specific to the user:

- advice of charge at end of call (SS-AOC-E);
- advice of charge at start of call (SS-AOC-S);
- advice of charge during call (SS-AOC-D);
- completion of call on no reply (SS-CCNR);
- completion of call to a busy subscriber (SS-CCBS);
- call distribution (SS-DIST);
- call forwarding on busy (SS-CFB);
- call forwarding on no reply (SS-CFNR);
- call forwarding unconditional (SS-CFU);
- call intrusion (SS-CI);
- call offer (SS-CO);
- call priority interruption (SS-CPI);
- call priority interruption protection (SS-CPIP);
- call transfer (SS-CT);
- calling line identification presentation (SS-CLIP);
- calling name identification presentation (SS-CNIP);
- calling/connected line identification restriction (SS-CLIR);
- calling/connected name identification restriction (SS-CNIR);
- connected line identification presentation (SS-COLP);
- connected name identification presentation (SS-CONP);
- CTM Authentication of the Network (SS-CTAN);
- CTM Authentication of the Terminal (SS-CTAT);
- CTM Location Registration (SS-CTLR);
- do-not-disturb (SS-DND);
- do-not-disturb override (SS-DNDO);
- message waiting indication (SS-MWI);
- PUM Registration (SS-PUMR);
- recall (SS-RE).

Indications for the following services which are not standardized shall be included as and when they become standardized. Annex A includes suggestions of the information that could be transferred between PINXs in order to support these non-standardized services:

- add-on conference (SS-CONF);
- call deflection (SS-CD);
- call hold (SS-HOLD);
- call park (SS-CPK);
- call pick-up (SS-CPU);
- call shuttle
- call waiting (SS-CW);
- controlled diversion consult (SS-CDIVC);
- controlled diversion immediate (SS-CDIVI);
- in-call modification (SS-IM);
- last number redial
- malicious call identification (SS-MCID);
- night service (SS-NS);
- personal abbreviated dialling
- priority access to the attendant
- saved number redial
- send DTMF tones to line
- serial call (SS-SC);
- timed reminder
- user-to-user signalling (SS-UUS).

5.3 Organizational management services

A mobile user's service profile should contain indications of the availability of the following non-standardized services which are important in the management and control of an organization:

- account codes
- call barring
- closed user group (SS-CUG);
- common use abbreviated dialling

6 Information contents of service profile

Table 1 defines the information elements that, together, fully identify the user.

Table 1: User identification elements

Information elements	Status
User's PISN number	Mandatory
User's name (for use in CNIP and CONP services)	Optional
NOTE: The Name element defined for the CNIP and CONR services is of sufficient length to include the user's name as well as organizational indicators such as department and location.	

Many of the services identified in a user's service profile require additional information to indicate which options the user subscribes to and what values are set for the parameters that the user is able to modify.

6.1 User services

Table 2 identifies the information which shall be included for each standardized service described in a service profile and the parameters that can be changed to adapt or characterize the service for each user. Although not shown in the table, a service profile shall also indicate whether or not each service is available for use by the mobile user.

Table 2: Options and user parameters for standardized services

Service	Options	Parameters
Advice of charge at the start of call	Mode: - Service applies to all calls; - Service is applied on a call by call basis.	
Advice of charge during call	Mode: - Service applies to all calls; - Service is applied on a call by call basis.	
Advice of charge at the end of call	Mode: - Service applies to all calls; - Service is applied on a call by call basis.	
Completion of call on no reply	Recall mode: - SS-CCNR recall offered to all compatible terminals; - SS-CCNR recall offered to the terminal which invoked the service.	
Completion of call to a busy subscriber	Recall mode: - SS-CCBS recall offered to all compatible terminals; - SS-CCBS recall offered to the terminal which invoked the service.	
Call forwarding on busy	Notification options: - served user receives notification that call has been forwarded; - calling user receives notification that call has been forwarded with diverted-to number/name; - calling user receives notification that call has been forwarded without diverted-to number/name; - served user releases his/her number/name to diverted-to user; - Call cannot be further diverted with CFU. Activation options: - activation and deactivation by the user is authorized; - remote activation and deactivation is authorized; - activation uses existing diverted-to number unless new one specified.	Activation status: - activated; - deactivated. Address of diverted-to user for calls from an internal source, i.e. from within the PISN (note 1). Address of diverted-to user for calls from an external source, i.e. from outside the PISN (note 1). Password or other authorization code if required for remote activation and deactivation (note 2).
Call Forwarding on No Reply	Notification options: - served user receives notification that call has been forwarded; - calling user receives notification that call has been forwarded with diverted-to number/name; - calling user receives notification that call has been forwarded without diverted-to number/name; - served user releases his/her number/name to diverted-to user; - Call cannot be further diverted with CFU. Activation options: - activation and deactivation by the user is authorized; - remote activation and deactivation is authorized; - activation uses existing diverted-to number unless new one specified.	Activation status: - activated; - deactivated. Address of diverted-to user for calls from an internal source, i.e. from within the PISN (note 1). Address of diverted-to user for calls from an external source, i.e. from outside the PISN (note 1). Password or other authorization code if required for remote activation and deactivation (note 2).
Call forwarding unconditional	Notification options: - served user receives notification that call has been forwarded; - calling user receives notification that call has been forwarded with diverted-to number/name; - calling user receives notification that call has been forwarded without diverted-to number/name; - served user releases his/her number/name to diverted-to user; - Call cannot be further diverted with CFU. Activation options: - activation and deactivation by the user is authorized; - remote activation and deactivation is authorized; - activation uses existing diverted-to number unless new one specified.	Activation status: - activated; - deactivated. Address of diverted-to user for calls from an internal source, i.e. from within the PISN (note 1). Address of diverted-to user for calls from an external source, i.e. from outside the PISN (note 1). Password or other authorization code if required for remote activation and deactivation (note 2).

Service	Options	Parameters
Call intrusion	Served user may request: <ul style="list-style-type: none"> - force release user C; - isolate user C; - transition to wait on busy state. Other users are given impending intrusion warning.	Call Intrusion Capability Level (CICL); Call Intrusion Protection Level (CIPL) (note 3).
Call offer	Invocation options: <ul style="list-style-type: none"> - network (immediate); - any combination of: <ul style="list-style-type: none"> - consultation; - immediate; - network (delayed). 	Call offer protection status (note 3): <ul style="list-style-type: none"> - calls can be offered to this user; - calls cannot be offered to this user.
Call priority interruption		Call Priority Interruption Capability Level (CPICL).
Call priority interruption protection		Call Priority Interruption Protection Level (CPIPL) (note 3).
Calling/connected line identification restriction	CLIR Mode: <ul style="list-style-type: none"> - permanent (all calls); - temporary (user specified calls): - presentation restricted is default; - presentation not restricted is default. 	
Calling/connected name identification restriction	CNIR Mode: <ul style="list-style-type: none"> - permanent (all calls); - temporary (user specified calls): - presentation restricted is default; - presentation not restricted is default. 	
Connected line identification presentation	Called party number is provided; Busy party number is provided.	
Connected name identification presentation	Called party name is provided; Busy party name is provided.	
CTM Authentication of the Network		Authentication parameters.
CTM Authentication of the Terminal	Authenticate on outgoing calls: <ul style="list-style-type: none"> - International calls only; - National trunk calls and international calls; - All calls. 	Authentication parameters.
CTM Location Registration	Explicit de-registration is permitted	
Do-not-disturb	Served user notification of invocation of SS-DND; Remote activation and deactivation is authorized.	DND Protection Level (DNDPL). Activation status: <ul style="list-style-type: none"> - activated; or - deactivated.
Do-not-disturb override	Invocation options: <ul style="list-style-type: none"> - network; - consultation; - immediate; - consultation and immediate. 	DNDO Capability Level (DNDOCL).
Message Waiting Indication	Optional information provided on activation <ul style="list-style-type: none"> - the identity of the Message Centre; - the number of messages waiting for the Served User for that basic service; - the address of the user that left a message; - the time when a message was left; - the priority of the highest priority message waiting for that basic service. 	Information on each existing unanswered message.
Private User Mobility Registration	Registration Options: <ul style="list-style-type: none"> - OutCall registration permitted; - AllCall registration permitted. 	Maximum duration of each InCall registration session. Limit of OutCall registration session: <ul style="list-style-type: none"> - maximum duration of session; - maximum number of outgoing calls session. Maximum duration of each AllCall registration session.

Service	Options	Parameters
Recall		Recall type: <ul style="list-style-type: none"> - recall on no answer - selected; - de-selected - recall on busy; - selected; - de-selected.
NOTE 1: If the diverted to user is external to the PISN, it might be necessary for the user's number to be specified as a complete ISDN number including national and international region codes according to ITU-T Recommendation E.164 [20].		
NOTE 2: For security reasons, it might be desirable to maintain all passwords and authorization codes at the Home PINX rather than in the service profile transferred to the Visitor PINX.		
NOTE 3: Users not subscribing to this service can have a value set in this option or parameter.		

6.2 Organizational management services

Table 3 identifies the options which should be indicated for each organizational management service described in a service profile and the parameters that can be changed by or for the user.

Table 3: Options and user parameters for organizational management services

Service	Options	Parameters
Account codes	User options: <ul style="list-style-type: none"> - account code shall be provided with all outgoing calls; - account code can be provided with some outgoing calls identified by the caller. Account code type: <ul style="list-style-type: none"> - verified (codes shall match with one from a predefined list); - unverified (any sequence of characters can be used as the account code). 	List of account codes that can be entered by the user if "verified account codes" is selected. Default account code to be used if no other is provided (note 1).
Call Barring - Outgoing (note 2)	Barring method: <ul style="list-style-type: none"> - barring category; - barring tables: <ul style="list-style-type: none"> - explicit specification of barred destinations: <ul style="list-style-type: none"> - without exceptions; - with exceptions; - explicit specification of allowed destinations; - refer to Home PINX to determine whether to allow each call. 	Barred or allowed call types. One or more of the following: <ul style="list-style-type: none"> - intra-PISN; - inter-PISN; - local public network; - national public network; - international public network; - PISN call to Home PINX; - public network call to user's home country. OR Lists of complete or partial destination numbers that are allowed or barred. Lists of destination numbers that are exceptions to the general barring.
Call Barring - Incoming (note 2)	Barring table type: <ul style="list-style-type: none"> - Explicit specification of barred origins: <ul style="list-style-type: none"> - without exceptions; - with exceptions; - Explicit specification of allowed origins. 	Lists of complete or partial originating numbers that are allowed or barred. Lists of originating numbers that are exceptions to the general barring.
Common Use Abbreviated Dialling		For each code pair stored: <ul style="list-style-type: none"> - the short dialling code; - the destination number which shall either be a PISN number or a complete ISDN number (including national and international region codes) as described in ITU-T Recommendation E.164 [20].
NOTE 1: Users not subscribing to this service can have a value set in this parameter.		
NOTE 2: Barring tables can contain numbering information that is specific to a PINX rather than to the whole PISN. It is possible that this information will have no useful meaning if transferred to a remote Visitor PINX.		

6.3 Manufacturer specific service profile information

It shall be possible to include in a service profile transmitted from one PINX to another, information relating to proprietary services not included in tables 2 and 3. This information shall identify the PINX manufacturer. The format of those parts of the information that identify the mark or family of the PINX and that relate to service options and parameters is not defined in the present document.

6.4 Network-defined service profile

Table 4 specifies the information that shall be transmitted between PINXs in order to identify one of the fixed, network-defined service profile for a mobile user registering at a new Visitor PINX. The table indicates which elements are mandatory and which are optional.

Table 4: Identification of network-defined service profile

Information elements	Status
Network-defined service profile identifier	Mandatory
Call forwarding on busy, diverted-to address(es)	Optional
Call forwarding on busy, activation status	Optional
Call forwarding on no reply, diverted-to address(es)	Optional
Call forwarding on no reply, activation status	Optional
Call forwarding unconditional, diverted-to address(es)	Optional
Call forwarding unconditional, activation status	Optional
Do-not-disturb, activation status	Optional
Message waiting, number of unanswered messages	Optional
Message waiting, information on unanswered messages	Optional

Annex A (informative):

Service profile information for non-standardized services

Table A.1 identifies the options which could be selected in a service profile for each non-standardized service and the parameters that can be changed to adapt or characterize the service for each user.

Table A.1: Options and user parameters for non-standardized services

Service	Options	Parameters
Add-on conference		
Call deflection		Address of diverted-to user (note 1).
Call distribution		
Call hold	Call retrieval option: - only at the invoking terminal; - from a remote terminal.	User cannot be put on hold (note 4).
Call park	Calls can be parked locally; Calls can be parked remotely;	User cannot be parked (note 4).
Call shuttle	Action when controlling user clears: - other parties are connected (transfer); - other parties are released.	
Call waiting	Calling user receives notification that call is waiting.	
Closed user group	Incoming calls allowed; Outgoing calls allowed; Incoming and outgoing calls allowed.	Closed User Group identifier(s).
Controlled diversion consult		
Controlled diversion immediate		
In-call modification		Identification of other services to which an active call may be switched.
Last Number Redial	Number save option: - only external numbers are saved; - internal and external numbers are saved.	Last number dialled (note 3).
Malicious Call Identification		
Night Service		Address of Night Service Diversion Point.
Personal Abbreviated Dialling		For each code pair stored: - the short dialling code; - the destination number which shall either be a PISN number or a complete ISDN number (including national and international region codes) as described in ITU-T Recommendation E.164 [20].
Priority Access to Attendant		
Saved Number Redial		Last saved number (note 3).
Send DTMF tones to line		
Serial Call		
Timed Reminder	Time specification option: - Time of day; - Elapsed time; - Both options are available.	Time of reminder: - Time of day (note 5): - Year; - Month; - Day; - Hour; - Minute. - Elapsed time: - Hours; - Minutes; - Seconds.

Service	Options	Parameters
User-to-User Signalling	User-to-user signalling mode 1 available; User-to-user signalling mode 2 available; User-to-user signalling mode 3 available.	
NOTE 1: If the diverted-to user is external to the PISN, it might be necessary for the user's number to be specified as a complete ISDN number including national and international region codes according to ITU-T Recommendation E.164 [20].		
NOTE 2: For security reasons, it might be desirable to maintain all passwords and authorization codes at the Home PINX rather than in the service profile transferred to the Visitor PINX.		
NOTE 3: Saved numbers might have no meaning at a new Visitor PINX.		
NOTE 4: Users not subscribing to this service can have a value set in this parameter.		
NOTE 5: In PTNs that span more than one international time zone, it might be necessary to adjust the time of a reminder set by a user who subsequently roams between zones.		

History

Document history		
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