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Digitalno omrežje z integriranimi storitvami (ISDN) - Dopolnilna storitev: predaja klica, ko ni odziva (CFNR) - Opis storitve

Integrated Services Digital Network (ISDN); Call Forwarding No Reply (CFNR) supplementary service; Service description

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

As an editorial comment received during OAP title has been aligned with the former versions of this standard.

National transposition dates	
Date of adoption of this EN:	25 May 2001
Date of latest announcement of this EN (doa):	31 August 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	28 February 2002
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1 Scope

The present document defines the stage one of the Call Forwarding No Reply (CFNR) supplementary service for the pan-European Integrated Services Digital Network (ISDN) as provided by European telecommunication operators. Stage one is an overall service description from the user's point of view (see ITU-T Recommendation I.130 [1]), but does not deal with the details of the human interface itself.

The present document defines the interworking requirements of private ISDNs with the public ISDN.

In addition, the present document specifies the base functionality where the service is provided to the user via a private ISDN.

The present document does not specify the additional requirements where the service is provided to the user via telecommunications network that is not an ISDN but does include interworking requirements of other networks with the public ISDN.

Interactions with supplementary services not listed in clause 7 are outside the scope of the present document.

Charging principles are outside the scope of the present document.

The CFNR supplementary service enables a served user to have the network redirect to another user calls which are addressed to the served user's ISDN number, and for which the connection is not established within a defined period of time. The CFNR supplementary service may operate on all calls, or just those associated with specified basic services. The served user's ability to originate calls is unaffected by the CFNR supplementary service.

The CFNR supplementary service is applicable to all circuit-switched telecommunication services.

The present document is applicable to the stage two and stage three standards for the ISDN CFNR supplementary service. The terms "stage two" and "stage three" are also defined in ITU-T Recommendation I.130 [1]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorization leaving freedom, or as a capability or possibility), this shall be reflected in the text of the relevant stage two and stage three standards.

Furthermore, conformance to the present document is met by conforming to the stage three standards with the field of application appropriate to the equipment being implemented. Therefore, no method of testing is provided for the present document.

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] ITU-T Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] ITU-T Recommendation I.112 (1993): "Vocabulary of terms for ISDNs".
- [3] ITU-T Recommendation E.164 (1997): "The international public telecommunication numbering plan".
- [4] ITU-T Recommendation I.210 (1993): "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [5] ETSI ETS 300 345: "Integrated Services Digital Network (ISDN); Interworking between public ISDNs and private ISDNs for the provision of telecommunication services; General aspects".

3 Definitions and abbreviations

3.1 Definitions

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

address: see ITU-T Recommendation E.164 [3], clause B.3.2

basic access: see ITU-T Recommendation I.112 [2], clause 2.4, definition 425

basic call procedures: procedures by which a call (as an instance of a basic telecommunication service) is established and terminated

(basic) service; Telecommunications service: see ITU-T Recommendation I.112 [2], clause 2.2, definition 201

(call) forwarding: general term applied to any functionality whereby a call is redirected automatically by the service provider to another user. The forms of forwarding are: unconditional, whereby all calls are redirected; busy, whereby calls encountering busy are redirected; and, no reply, whereby calls which are not answered within a time period are redirected

diversion: general term which includes all forms of forwarding, and includes deflection whereby calls are redirected by the user instead of being answered

diverted-to user: user to whom a call is redirected as a result of diversion

diverting user: user for whom the call is subjected to diversion

forwarded-to user: user to whom the call is redirected as a result of forwarding

Integrated Services Digital Network (ISDN): see ITU-T Recommendation I.112 [2], clause 2.3, definition 308

ISDN number: number conforming to the numbering plan and structure specified in ITU-T Recommendation E.164 [3]

primary rate access: see ITU-T Recommendation I.112 [2], clause 2.4, definition 426

served user: user to whom the CFNR supplementary service is provided

sub-address: see ITU-T Recommendation E.164 [3], clause B.3.3

supplementary service: see ITU-T Recommendation I.210 [4], clause 2.4

user A: calling user in a call which is subject to diversion

user B: served user when a call (from user A) is subject to the CFNR supplementary service

NOTE: In the context of multiple diversions, a suffix is used, e.g. 1, 2, ... n, n + 1, ... m, to denote the successive diverting users. For example, user B3 is also the diverted-to user with respect to the diversion applied at user B2.

user C: forwarded-to user in a call which is subject to the CFNR supplementary service. In the case of a call which is subject to multiple diversions, user C is the forwarded-to user with respect to the final call forwarding

3.2 Abbreviations

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

CFNR	Call Forwarding No Reply
ISDN	Integrated Services Digital Network
PSTN	Public Switched Telephone Network

4 Description

The CFNR supplementary service shall be available to users who are connected to the network via a basic access or a primary rate access.

The CFNR supplementary service enables a served user to have the network redirect to another user calls which are addressed to the served user's ISDN number, and for which the connection is not established within a defined period of time. The CFNR supplementary service may operate on all calls, or just those associated with specified basic services. The served user's ability to originate calls is unaffected by the CFNR supplementary service.

The CFNR supplementary service can only be invoked by the network after the call has been offered to the served user and an indication that the called user is being informed of the call has been received.

As a service provider option, a subscription option can be provided to enable the served user to receive an indication that the CFNR supplementary service has been activated. This indication shall be provided when the served user originates a call if the CFNR supplementary service has been activated for the served user's ISDN number and for the basic service requested for the call.

The maximum number of diversions permitted for each call is a service provider option with an upper limit of five diversions. When counting the number of diversions, all types of diversion are included.

5 Procedures

5.1 Provision and withdrawal

The CFNR supplementary service shall be provided after prior arrangement with the service provider.

As a service provider option, the CFNR supplementary service can be provided on a per ISDN number basis, or the CFNR supplementary service can apply to the whole access. If a service provider offers both of these options, then it shall be a subscription option to choose which of these options applies.

In addition, the CFNR supplementary service (including options) can be subscribed to for all basic services subscribed to by the user, or as a service provider option, the user can identify particular basic service(s) for which the CFNR supplementary service shall apply.

As a service provider option, the service can be offered with one or more of four subscription options, which can apply separately to each basic service subscribed to. If the CFNR supplementary service is provided on a per ISDN number basis, then these options can apply separately to each ISDN number. For each subscription option, only one value can be selected. Subscription options are summarized in table 1.

Table 1

Subscription options	Value
Served user receives notification that the call has been forwarded	- no - yes
Calling user receives notification that the call has been forwarded	- no - yes, without the ISDN number of the forwarded-to user - yes, with the ISDN number of the forwarded-to user
Served user receives notification that the CFNR supplementary service is currently activated	- no - yes
The served users ISDN number can be presented to the forwarded-to user	- no - yes

As a service provider option, the value of the no reply timer shall be able to be changed by the served user by means of a subscriber procedure.

As a service provider option, a subscription option can be offered to served users, to enable the CFNR supplementary service to be activated, deactivated and interrogated for all ISDN numbers on the same access. ISDN numbers for which the CFNR supplementary service is not subscribed to shall not be affected.

The CFNR supplementary service shall be withdrawn by the service provider upon request of the subscriber or for service provider reasons.

5.2 Normal procedures

5.2.1 Registration and erasure

Registration of information is performed on activation of the CFNR supplementary service.

There are no separate registration procedures for the CFNR supplementary service.

5.2.2 Activation and deactivation

5.2.2.1 Activation

The served user shall supply the following information when requesting the activation of the CFNR supplementary service:

- the ISDN number of the forwarded-to user, which can be accompanied by a **sub-address** for additional identification of the forwarded-to user; and
- information as to whether the activation of the CFNR supplementary service is for all basic services to which the CFNR supplementary service applies, or for a specific basic service out of the basic services to which the CFNR supplementary service applies; and
- the value in seconds of the no reply timer, if different from the present value. (Maximum value 180 seconds.).

When subscription applies on a per ISDN number basis and more than one ISDN number is allocated to the access, then:

- the served user shall also supply the ISDN number for which the activation of the CFNR supplementary service shall apply; or
- as a service provider option, the served user can, if subscribed to, indicate that the activation of the CFNR supplementary service shall apply for all ISDN numbers for which the CFNR supplementary service is subscribed to. In this case, this activation shall replace any previous activation of the CFNR supplementary service which may be in force on individual ISDN numbers on the access, for the basic services indicated at activation.

When subscription applies for the whole access, or only one ISDN number is allocated to the access, the served user need not provide an ISDN number to identify the served user. If the served user includes an ISDN number allocated to that access, or indicates that the activation of the CFNR supplementary service shall apply to all ISDN numbers (if this functionality is offered by the service provider and subscribed to by the served user) then the ISDN number, or the indication of all ISDN numbers, shall be ignored. Activation of the CFNR supplementary service shall proceed as normal.

The served user can separately activate the CFNR supplementary service for each basic service to which the CFNR supplementary service applies and thereby request a different ISDN number and/or **sub-address** to identify the forwarded-to user for each basic service to which the CFNR supplementary service applies.

When the CFNR supplementary service is activated for all basic services, this activation shall replace any previous activation of the CFNR supplementary service which may be in force on individual basic services.