ETSI

EUROPEAN
TELECOMMUNICATION
STANDARD

ETS 300 217-4

December 1992

Source: ETSI TC-NA

Reference: DE/NA-053201-4

ICS: 33.040

Key words: Network, CBDS

Network Aspects (NA);
Connectionless Broadband Data Service (CBDS)
Part 4: Address screening supplementary service

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Foreword

This part of European Telecommunication Standard (ETS) 300 217 has been prepared by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

According to CCITT Recommendation I.130, the following three level structure is used to describe the characterisation of telecommunication services:

- Stage 1: is an overall service description, from the user's standpoint;

- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1;

- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS details the stage 1 aspects for the Connectionless Broadband Data Service (CBDS).

This part constitutes Part 4 of the 4 part ETS on the CBDS, and describes the address screening supplementary service.

A list of informative references is given in Annex A.

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1 Scope

This part of European Telecommnunication Standard (ETS) 300 217 on the Connectionless Broadband Data Service (CBDS) describes the supplementary service address screening of the CBDS. Address screening is a means of the network to enable a user to send data to a list of receivers only and to receive data from a list of senders only. This supplementary service improves the basic security features of the network.

2 Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   CCITT Recommendation E.164 (1991): "Numbering plan for the ISDN era".

[2]   ETS 300 217-1 (1992): "Network Aspects (NA); Connectionless Broadband Data Service (CBDS) Part 1: Overview".

3 Definitions and abbreviations

3.1 Definitions

The definitions used in this ETS are given in ETS 300 217-1 [2], subclause 3.1.

3.2 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

ATM	Asynchronous Transfer Mode
CBDS	Connectionless Broadband Data Service
CUG	Closed User Group
DA	Destination Address
MAN	Metropolitan Area Network
PDU	Protocol Data Unit
SA	Source Address
T	T reference point
UMI	User MAN Interface
UNI	User Network Interface

4 Description

4.1 General description

Address screening allows restrictions to be enforced on the delivery of Protocol Data Units (PDUs) in Metropolitan Area Networks (MANs) and an Asynchronous Transfer Mode (ATM) based network from certain sources, and the transmission of data to certain destinations.

The service address supplementary service screening ensures that a user cannot receive data from certain users and that a user can send data to certain users only. Address screening may be applied to both individual addresses and group addresses.

The address shall be modelled according to CCITT Recommendation E.164 [1].

There are different types of address screening:

1) Destination Address (DA) screening of individual addresses;

2) DA screening of group addresses;

3) source address screening of individual addresses.

4.1.1 Destination address screening of individual addresses

A user identified by a single address can/cannot send data to destinations which are identified by certain individual addresses only.

4.1.2 Destination address screening of group addresses

A user identified by a single address can/cannot send data to destinations which are identified by certain group addresses only.

4.1.3 Source address screening of individual addresses

A user identified by a single address can/cannot receive data from certain sources only.

4.2 Specific terminology

None.

4.3 Qualifications on the applicability to telecommunication services

This supplementary service applies to the CBDS.

5 Procedures

5.1 Provision and withdrawal

Address screening is provided on subscription basis. This subscription option applies separately to each CCITT Recommendation E.164 [1] number.

Table 1: Types of address screening

Type of address screening	Maximum number of addresses in the set
Destination address screening of individual addresses.	for further study.
Destination address screening of group addresses.	for further study.
Source address screening of individual addresses.	for further study.

5.2 Normal procedures

5.2.1 Activation, deactivation and registration

Activation through subscription. On demand is for further study.

5.2.2 Invocation and operation

The network shall carry out internal checks to determine whether or not the transfer of a PDU is allowed between the two parties concerned.

5.2.2.1 Destination address screening of individual addresses

The network has the ability to check the DA of each PDU sent from the user against a set of candidate DAs. The set of candidate DAs shall consist of one, and only one, of the following:

- a set of "allowed individual DAs";

- a set of "disallowed individual DAs".

If the candidate DAs are "allowed DAs", and the DA of the PDU does not match one of the candidate DAs, the PDU shall not be delivered. If the candidate DAs are "disallowed addresses", and the DA of the PDU does match one of the candidate DAs, the PDU shall not be delivered.

5.2.2.2 Destination address screening of group addresses

The same procedure as in subclause 5.2.2.1 is also maintained for group addresses. In the case of a PDU with a destination group address, the network shall perform the DA screening by checking the group address against the group addresses in the set of "allowed" or "disallowed" DAs.

5.2.2.3 Source address screening of individual addresses

Since a Source Address (SA) cannot be a group address, only SA screening with individual addresses can be provided. The network has the ability to check the SA of each PDU to be delivered to the user against a set of candidate SAs. The set of candidate SAs will consist of one, and only one, of the following:

- a set of "allowed SAs";

- a set of "disallowed SAs".

If the candidate SAs are "allowed SAs" and the SA of the PDU does not match one of the candidate addresses, the PDU shall not be delivered. If the candidate SAs are "disallowed addresses" and the SA of the PDU does match one of the candidate SAs, the PDU shall not be delivered.

5.2.2.4 Interaction between source address screening of individual addresses and destination address screening of group addresses

In the case of a PDU with a destination group address, one or more of the destination addresses represented by the group address may have source address screening invoked, such that PDUs from the specific SA are not allowed to be delivered. In such a case, the PDU is not delivered to the address where screening is invoked, but the PDU shall be delivered to all addresses represented by the group address where no screening applies.

> NOTE: In case of User Network Interface/User Network Interface (UNI/UMI), if more than one CCITT Recommendation E.164 [1] number is allocated to the interface at the T reference point, the network cannot guarantee that the user sends the correct SA of the set of CCITT Recommendation E.164 [1] numbers which are allocated to the user.

5.3 Exceptional procedures

None.

5.4 Alternative procedures

None.

5.5 Verification

Not applicable.

6 Network capabilities for charging

It shall be possible to charge the subscriber for this service.

7 Interworking requirements

None.

8 Interaction with other supplementary services

Address screening may be the basis for CUGs. No other supplementary service interaction should be allowed which could compromise this interaction.

Annex A (informative): Bibliography

The following reference appears for information purposes within the text of this part of ETS 300 217.

[A1]   CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".

History

Document history	
December 1992	First Edition
February 1996	Converted into Adobe Acrobat Portable Document Format (PDF)