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Network Aspects (NA); Connectionless Broadband Data Service (CBDS); Part 1: Overview

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ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE
Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE
X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 92 94 42 00 - Fax: +33 93 65 47 16

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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 1 of the 4 part ETS on the CBDS, and gives a general overview of the service.

A list of informative references, used throughout this document, is given in Annex A.

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1 Scope

This part of European Telecommunication Standard (ETS) defines the stage 1 of the Connectionless Broadband Data Service (CBDS) which can be provided by Metropolitan Area Networks (MANs) (see ETS 300 211 [6]) and an Asynchronous Transfer Mode (ATM) based network. Whilst this bearer service category is aiming primarily at Local Area Network (LAN) interconnections (see ISO/IEC DIS 8802-1 [16]), other uses are also envisaged.

This 4 part ETS defines a CBDS which is independent of the layers above. The bearer service category could be provided by any network but it is particularly suited for MANs and an ATM based network. Each Protocol Data Unit (PDU) is transferred transparently and separately without the establishment of an end-to-end connection, with no guarantee of delivery and no acknowledgement of delivery. However, the underlying network provides a highly reliable service which is reflected by the defined Quality of Service (QOS) parameters.

If certain applications require a better QOS, higher layer protocols, e.g. connection-oriented transport protocols, will perform additional functions. Since the network provides a transparent transfer of data, at least in principle, any higher layer protocol may be employed. The inherent delay of long distance communications could degrade end to end performance as seen by the user if end to end communication protocols are not adequate.

This 4 part ETS contains a stage 1 description of the CBDS, according to CCITT Recommendation I.130, which contains a general description and a list of communication attributes. However, this document goes beyond a stage 1 description where additional information seems to be required for an early implementation of the CBDS.

This part, Part 1, contains an overview of the CBDS. The description of the basic bearer service category is given in Part 2 of this ETS, ETS 300 217-2 [12]. Part 3, ETS 300 217-3 [13] defines the supplementary services. Part 4, ETS 300 217-4 [14] describes the address screening supplementary service.

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] ISO/IEC 8802-3 (1990): "Information processing systems - Local area networks - Part 3: Carrier sense multiple access with collision detection (CSMA/CD) - access method and physical layer specifications".

[2] ISO/IEC 8802-5 (1988): "Information processing systems - Local area networks - Part 5: Token ring access method and physical layer specifications."

[3] IEEE 802.6 (1990): "Distributed Queue Dual Bus (DQDB) subnetwork of a metropolitan area network (MAN)".

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

[5] CCITT Recommendation I.413 (1991): "B-ISDN user-network interface".

[6] ETS 300 211 (1992): "Network Aspects (NA); Metropolitan Area Network (MAN) Principles and architecture".

[7] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".

[8] CCITT Recommendation E.800 (1988): "Quality of service and dependability vocabulary".

[9] CCITT Recommendation I.324 (1988): "ISDN network architecture".