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Širokopasovno digitalno omrežje z integriranimi storitvami (B-ISDN) – Storitve širokopasovne navidezne poti (BVPS) – 2. del: BVPS za rezervirane komunikacije (BVPS-R)

Broadband Integrated Services Digital Network (B-ISDN); Broadband Virtual Path Service (BVPS); Part 2: BVPS for Reserved communications (BVPS-R)

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Foreword

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

This ETS defines stage one of the Broadband Virtual Path Service (BVPS) for a Broadband Integrated Services Digital Network (B-ISDN), as provided by European public telecommunication operators.

This ETS consists of 2 parts as follows:

Part 1: "BVPS for Permanent communications (BVPS-P)".

Part 2: "BVPS for Reserved communications (BVPS-R)".

Transposition dates	
Date of adoption of this ETS:	31 August 1995
Date of latest announcement of this ETS (doa):	30 November 1995
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 May 1996
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1 Scope

This European Telecommunication Standard (ETS) defines the stage 1 of the Broadband Virtual Path Service for Reserved communications (BVPS-R) for a Broadband Integrated Services Digital Network (B-ISDN), as provided by European public telecommunication operators.

Part 1 of this ETS (ETS 300 455-1 [13]) defines the stage 1 of the Broadband Virtual Path Service for Permanent communications (BVPS-P) for a B-ISDN, as provided by European public telecommunication operators.

This ETS does not specify the additional requirements where the service is provided to the user via a telecommunication network that is not a B-ISDN, but it does include requirements for interworking of other networks with a B-ISDN.

This ETS is applicable to stage two and stage three standards for the BVPS-R. The terms "stage two" and "stage three" are also defined in CCITT Recommendation I.130 [4]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorisation 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 this ETS 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 this ETS.

Charging principles and management operations are outside the scope of this ETS.

The BVPS-R provides the transfer of unrestricted digital information between T_B or S_B/T_B reference points. It does not preclude the applicability of the BVPS-R to S_B .

The provision of the BVPS-R is based on the use of Asynchronous Transfer Mode (ATM) Virtual Path (VP) connections in a B-ISDN. (standards.iteh.ai)

2 Normative references

This ETS incorporates by dated and 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] ITU-T Recommendation I.112 (1993): "Vocabulary of terms for ISDNs".
- [3] ITU-T Recommendation I.113 (1993): "Vocabulary of terms for broadband aspects of ISDN".
- [4] CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [5] ITU-T Recommendation I.140 (1993): "Attribute technique for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [6] ITU-T Recommendation I.150 (1993): "B-ISDN asynchronous transfer mode functional characteristics".
- [7] ITU-T Recommendation I.356 (1993): "B-ISDN ATM layer cell transfer performance".

- [8] ITU-T Recommendation I.361: "B-ISDN ATM layer specification".
- [9] ITU-T Recommendation I.371 (1993): "Traffic control and congestion control in B-ISDN".
- [10] ITU-T Recommendation M.3010 (1993): "Principles for a telecommunications management network".
- [11] ETS 300 299: "Broadband Integrated Services Digital Network (B-ISDN); Cell based user network access; Physical layer interfaces for B-ISDN applications".
- [12] ETS 300 300: "Broadband Integrated Services Digital Network (B-ISDN); Synchronous Digital Hierarchy (SDH) based user network access; Physical layer interfaces for B-ISDN applications".
- [13] ETS 300 455-1: "Broadband Integrated Services Digital Network (B-ISDN); Broadband Virtual Path Service (BVPS); Part 2: BVPS for Permanent communications (BVPS-P)".

3 Definitions, symbols and abbreviations

3.1 Definitions

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

Asynchronous Transfer Mode (ATM): See ITU-T Recommendation I.113 [3], definition 204.

broadband: See ITU-T Recommendation I.113 [3], definition 101.

Cell Delay Variation (CDV) tolerance: The CDV tolerance τ corresponds to the maximum anticipated time variation with respect to the Theoretical Arrival Time, see ITU-T Recommendation I.371 [9], subclause 2.4.1.1.

Global Virtual Path Identifier (GVPI): The GVPI identifies a specific Virtual Path (VP). It is used by the Service Management Entity (SME) for the management of the complete VP.

initiating manager: The manager issuing a request to the SME.

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

involved manager: The manager receiving a request issued by another initiating manager.

ISDN number: A number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [1].

manager: The functional entity authorised to send through x reference point (as defined in ITU-T Recommendation M.3010 [10]) the VP registration requests, VP modification requests and interrogation requests, on behalf of the users to which it is related at the subscription time (see figure A.1).

non-periodic VP: A non-periodic VP is a VP whose values of PBR and Quality of Service (QoS) are constant for the reservation duration.

Peak Cell Rate (PCR): See ITU-T Recommendation I.371 [9], subclause 2.4.1.1. The PCR is expressed as an integer number of cells per second.

Peak Emission Interval (PEI): See ITU-T Recommendation I.371 [9], subclause 2.4.1.1.

periodic VP: A periodic VP is a VP whose same scheme of the values of PBR and QoS repeats within each period for the reservation duration.

service, telecommunication service: See ITU-T Recommendation I.112 [2], definition 201.

Service Management Entity (SME): The SME is the functional entity to which manager's VP registration requests, VP modification requests and interrogation requests are addressed (see figure A.1).

subscriber: The entity that subscribes to the BVPS-R.

time slot: The time interval between the activation and the following deactivation of a VP. The duration of an i^{th} time slot De_i is defined by $De_i = De_{\min} + M_i \times P$ where De_{\min} is the minimum duration of the time slot, M_i is an integer and P is a fixed duration of time. De_{\min} and P are service constants.

user: Each of the subscriber's functional entity that sends or receives ATM cells through T_B or S_B/T_B reference point (see figure A.1).

Virtual Channel (VC): See ITU-T Recommendation I.113 [3], definition 401.

Virtual Channel Identifier (VCI): A logical number that locally identifies a specific VC at the User-Network Interface (UNI).

Virtual Path (VP): From the user's point of view, a virtual end-to-end connection that ensures unidirectional or bi-directional transport of ATM cells belonging to VCs that are associated by a common VPI at each UNI.

Virtual Path Identifier (VPI): A logical number that locally identifies a specific VP at the UNI.

3.2 Symbols and abbreviations

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

ATM	Asynchronous Transfer Mode
B-ISDN	Broadband Integrated Services Digital Network
BVPS-P	Broadband Virtual Path Service for Permanent communications
BVPS-R	Broadband Virtual Path Service for Reserved communications
CBR	Constant Bit Rate
CDV	Cell Delay Variation
GVPI	Global Virtual Path Identifier
(N-)ISDN	(Narrowband) Integrated Services Digital Network
PCR	Peak Cell Rate
PEI	Peak Emission Interval
QoS	Quality of Service
SME	Service Management Entity
SP	Service Provider
UNI	User-Network Interface
VBR	Variable Bit Rate
VC	Virtual Channel
VCI	Virtual Channel Identifier
VP	Virtual Path
VPI	Virtual Path Identifier