

## **Network Aspects (NA); Terms and definitions**

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**Reference**

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**Keywords**

vocabulary

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## Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Network Aspects (NA).

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## 1 Scope

The present document lists the terms used in the ETSI Standards and Technical Reports covering network aspects in general. Included are terms already defined in other technical areas if they have a special sense in a network aspects context or if an unambiguous definition is essential.

The terms are listed in alphabetical order only and are not sorted according to the technical area (services, powering, transfer mode signalling, interfaces etc.) to which they belong.

The list of abbreviations and acronyms include acronyms defined in other contexts and used in network aspect documents.

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## 2 References

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

ITU-T Recommendation I.113: "Vocabulary of terms for broadband aspects of ISDN".

ITU-T Recommendation I.371: "Traffic control and congestion control in B-ISDN".

ITU-T Recommendation I.374: "Framework Recommendation on network capabilities to support multimedia services".

ITU Radio Regulations.

ETR 044: "Network Aspects (NA); Reference events for network performance parameters in an ISDN".

ETR 149: "Network Aspects (NA); Interworking between Metropolitan Area Networks (MANs) and Asynchronous Transfer Mode (ATM) networks for the Connectionless Broadband Data Service (CBDS)".

ETR 155: "Asynchronous Transfer Mode (ATM); Operation Administration and Maintenance (OAM) functions and parameters for assessing performance parameters".

ETR 161: "Broadband Integrated Services Digital Network (B-ISDN); Functional description of Virtual Path (VP) cross-connect".

ETS 300 349: "Broadband Integrated Services Digital Network (B-ISDN); Asynchronous Transfer Mode (ATM); Adaptation Layer (AAL) specification - type 3/4".

I-ETS 300 353: "Broadband Integrated Services Digital Network (B-ISDN); Asynchronous Transfer Mode (ATM); Adaptation Layer (AAL) specification - type 1".

ETS 300 354: "Broadband Integrated Services Digital Network (B-ISDN); B-ISDN Protocol Reference Model (PRM)".

ETS 300 404: "Broadband Integrated Services Digital Network (B-ISDN); B-ISDN Operation And Maintenance (OAM) principles and functions".

ETS 300 469: "Broadband Integrated Services Digital Network (B-ISDN); Asynchronous Transfer Mode (ATM); Management of the network element view [ITU-T Recommendation I.751 (1996)]".

ETS 300 478: "Network Aspects (NA); Connectionless Broadband Data Service (CBDS) over Asynchronous Transfer Mode (ATM); Framework and protocol specification at the User-Network Interface (UNI)".

ETS 300 479: "Network Aspects (NA); Connectionless Broadband Data Service (CBDS) over Asynchronous Transfer Mode (ATM); Protocol specification at the Network Node Interface (NNI)".

ETS 300 780: "Broadband Integrated Services Digital Network (B-ISDN); Broadband Connection-Oriented Bearer Service (BCOBCS) [ITU-T Recommendation F.811 (1996)]".

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## 3 Information about the present document

Terms and definitions taken from ITU Recommendations are identified by appropriate reference in parentheses at the end of the definition. The numbers after the I.112, I.113 and I.114 references are the word numbers in these documents.

Where the definitions has been based upon, but differs from, a definition from another document, the reference is given followed by "modified".

Terms defining general used acronyms such as **Asynchronous Transfer Mode (ATM)** are written with leading capitals.

Some definitions include terms in *italics face* to indicate that these terms are defined elsewhere in the present document.

The list of abbreviations and acronyms include acronyms such as PAL and SECAM normally not used in network aspect contexts but generally used in the relevant standards and technical reports. Also included are acronyms with more than one meaning such as CC for Call Control, Country Code or Cross Connect. For some acronyms it is indicated in brackets in which context they are created, e.g. (Internet), (ATM Forum). Some out-of-date acronyms are marked (deprecated).

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## 4 Vocabulary of terms

**access capability, ISDN access capability:** the number and type of the access channels at an ISDN access interface that are actually available for *telecommunication* purposes. [ITU-T Recommendation I.112-416]

**access channel (channel):** a designated part of the information transfer capability having specified characteristics, provided at the user network interface. [ITU-T Recommendation I.112-414]

NOTE 1: The term "transmission channel" is well understood to imply unidirectional working only, and the is commonly abbreviated to "channel". In the special case where the term "access channel" is used to encompass bidirectional working through the user-network interface, it must not be abbreviated to channel.

NOTE 2: The term "access channel" may be qualified, for example by H, B or D in which case it is appropriate to abbreviate the term to "H-channel", to "B-channel" or to "D-channel".

**access connection element (subscriber access):** the equipment providing the concatenation of functional groups between and including the *exchange* termination and the NT1. The term should be qualified by the type of access supported. That is:

- basic access *connection* elements;
  - primary rate access connection elements.
- [ITU-T Recommendation I.112-429]

**access contention resolution:** the arbitration of conflicting demands on a network termination in multipoint access. [ITU-T Recommendation I.112-424]

**access contention:** a conflict between the demands made on a network termination in multipoint access. [ITU-T Recommendation I.112-423]

**access network:** an implementation comprising those entities (such as cable plant, transmission facilities, etc.) which provide the required transport bearer capabilities for the provision of telecommunication services between a Service Node Interface (SNI) and each of the associated User Network Interfaces (UNI). An Access Network can be configured and managed through a Q3 interface. In principle there is no restriction on the types and the number of UNIs and SNIs which an access network may implement. The access network does not interpret (user) signalling. [ITU-T Recommendation G.902]

**access protocol:** a defined set of procedures that is adopted at an interface at a specified reference point between a user and a network to enable the user to employ the service and/or facilities of that network. [ITU-T Recommendation I.112-406]

**activation:** a function which places a system, or part of a system, which may have been in low power consumption mode during deactivation, into its fully operating mode. [ITU-T Recommendation I.112-602]

**address:** a *name* that contains location information.

**addressable entity:** an entity which is recognizable by the network, to which the network is able to route a *call*.

**addressing domain:** the context within an identifier (name, number, etc.) is unique.

**analogue signal:** a *signal* one of whose characteristic quantities follows continuously the variation of another quantity representing information. [ITU-T Recommendation I.112-103]

**assigned cell (ATM layer):** cell which provides a service to an application using the ATM layer service.

**Asynchronous Time Division (ATD) multiplexing:** a multiplexing technique in which a transmission capability is organized in undedicated slots filled with *cells* with respect to each application's instantaneous real need. In this case, the terminal equipment (i.e. the customer application) defines the actual transmitted bit rate, whatever this rate is, possibly variable during the *communication*. This technique carries a *labelled interface structure* over a *frame* or a *self-delineating labelled interface*. [ITU-T Recommendation I.113-202]

**Asynchronous Transfer Mode (ATM):** a *transfer mode* in which the information is organized into cells; it is asynchronous in the sense that the recurrence of cells containing information from an individual user is not necessarily periodic. [ITU-T Recommendation I.113-204]

**ATM Adaptation Layer (AAL):** the AAL uses the ATM layer service and include multiple protocols to fit the need of the different AAL service users. [ETS 300 353]

**ATM connection:** a concatenation of ATM layer links in order to provide an end-to-end transfer capability to access points. [ITU-T Recommendation I.113-505]

**ATM layer connection:** an association established by the ATM layer to support *communication* between two or more ATM service users (i.e. two or more next higher layer entities, or two or more ATM management entities). The *communication* over an ATM layer *connection* may be either bidirectional or unidirectional. [ITU-T Recommendation I.113-506]

**ATM link:** a link provides for the capability of transferring information transparently, and represents the association, between two contiguous *connecting points* or between an endpoint and its contiguous *connecting point*. [ITU-T Recommendation I.113-507]

**ATM traffic descriptor:** a generic list of traffic parameters that can be used to capture the intrinsic traffic characteristics of an ATM *connection*. [ITU-T Recommendation I.113-708]

**basic access, basic rate access:** an ISDN user access arrangement that corresponds to the interface structure composed of two B-channels and one D-channel. The bit rate of the D-channel for this type of access is 16 kbit/s. [ITU-T Recommendation I.112 modified]

**bearer service:** a type of *telecommunication* service that provides the capability for the transmission of signals between user-network interfaces. [ITU-T Recommendation I.112-202]

NOTE 3: The ISDN connection type used to support a bearer service may be identical to that used to support other types of telecommunication service.

**block payload:** the bits in the information field within a *block*. [ITU-T Recommendation I.113-304]

**block:** a unit of information consisting of a *header* and an information field. [ITU-T Recommendation I.113-301]

**branching point:** a connecting point splitting and/or merging 1 to n connection links.

**broadband access:** an ISDN access able to contain at least one channel capable of supporting a rate greater than the primary rate, or supporting an equivalent information transfer rate. [ITU-T Recommendation I.113-320]

**broadband communication channel:** a specific portion of the *information payload capacity*, available to the user for ISDN services. A *broadband communication* channel exists only during a call, as set-up by a *signalling* or administrative procedure. [ITU-T Recommendation I.113-321]

**broadband:** a service or system requiring transmission channels greater than the primary rate. [ITU-T Recommendation I.113-101 modified]

**broadcast communication:** unidirectional *communication* from a single source access point to an unlimited number (more than one) of unspecified destination access points. [ITU-T Recommendation I.140]

**broadcast connection:** unidirectional connection between one (source) endpoint and an unlimited number (more than one) of unspecified destination endpoints. [ITU-T Recommendation I.140]

**broadcast network:** a network providing a multitude of sound, television or other information signals to an unspecified number of users.

**broadcast organization:** an organization which runs a broadcast network.

**broadcast:** a *communication* configuration attribute which denotes unidirectional distribution to all users connected to the network and tuned for receiving.

**broadcasting service:** a radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission. [ITU Radio Regulations 36-3 and 36-17]

**call management:** the ability of a user to indicate to the network how to handle incoming calls according to certain parameters such as the originator of the call, the time of day and the nature of the call. [ITU-T Recommendation I.114-109]

NOTE 4: *Call management* is done through the user's service profile.

**call:** a logical association between two or more endpoints, offering the possibility to make use of a telecommunication service.

**CATV based access Network:** see *Hybrid Fiber Coax (HFC) access network*.

**CATV:** used as a general term for "cable television" (historical used to indicate "Community Antenna TeleVision" - a centralized installation of television antennas that serves a community of users). [ITU-T Recommendation J.1]

**Cell Delay Variation (CDV):** the variation of actual *cell* arrival times of an ATM connection with respect to the theoretical *cell* arrival times.

**cell delineation:** the identification of *cell* boundaries in a *cell* stream. [ITU-T Recommendation I.113-306]

**cell entry event:** an event which occurs when the last bit of an ATM *cell* has completed transmission across a measurement point along a connection. [ETR 155]

**cell exit event:** an event which occurs when the first bit of an ATM *cell* has completed transmission across a measurement point along a connection. [ETR 155]

**cell rate decoupling:** includes insertion and suppression of idle *cell*, in order to adapt the rate of valid ATM *cells* to payload capacity of the transmission system.

**cell:** a *block* of fixed length. It is identified by a label at the ATM layer of the B-ISDN protocol reference model. [ITU-T Recommendation I.113-305]

**channel, transmission channel:** a means of unidirectional transmission of signals between two points. [ITU-T Recommendation I.112-108]

NOTE 5: Several channels may share a common path; for example each channel may be allocated a particular frequency band or a particular time slot.

NOTE 6: The terms may be qualified by the nature of the transmitted signals, by the bandwidth, by the digit rate, or by an arbitrary designation.

NOTE 7: See also *access channel*.

**channel-associated signalling:** a method of *signalling* in which *signalling* information relating to a multiplicity of circuits or functions or for network management, is conveyed over a single channel by addressed messages. [ITU-T Recommendation I.112-502]



**circuit transfer mode:** a *transfer mode* in which transmission and switching functions are achieved by permanent allocation of channels/bandwidth between the *connections*. [ITU-T Recommendation I.113-206]

**circuit, telecommunication circuit:** a combination of two transmission channels permitting bi-directional transmission of signals between two points, to support a single *communication*. [ITU-T Recommendation I.112-111]

NOTE 8: If the telecommunication is by nature unidirectional (for example: long distance television transmission), the term "circuit" is sometimes used to designate the single channel providing the facility.

NOTE 9: In a telecommunication network use of the term "circuit" is generally limited to a telecommunication circuit directly connecting two switching devices or exchanges, together with associated terminating equipment.

NOTE 10: A telecommunication circuit may permit transmission in both directions simultaneously (duplex) or not simultaneously (simplex).

NOTE 11: A telecommunication circuit that is used for transmission in one direction only is sometimes referred to as a unidirectional telecommunication circuit. A telecommunication circuit that is used for transmission in both directions (whether simultaneously or not) is sometimes referred to as a bidirectional telecommunication circuit.

**collection connection:** an on demand, reserved or permanent connection transferring user information from a defined number of remote endpoints called leaves toward one endpoint called root. A collection connection is a special case of a point-to-multipoint connection. All flows (user and other - if appropriate) are only in one direction.

**common channel signalling:** a method of *signalling* in which *signalling* information relating to a multiplicity of circuits or functions or for network management, is conveyed over a single channel by addressed messages. [ITU-T Recommendation I.112-503]

**communication entity:** a physical or logical object that is able to take part in an instance of *communication*.

**communication:** transfer of information between two or more users according to agreed conventions. [ITU-T Recommendation I.112 modified]

**configuration management:** a set of management functions which exercise control over the extensions or reductions of a system, the status of the constituent parts and the identity of their allocation. [ITU-T Recommendation I.113-604]

**congestion control:** a set of actions taken to relieve congestion by limiting the spread and duration of it. [ITU-T Recommendation I.113-703]

**congestion:** a state of a network element in which the network element is not able to meet the negotiated QOS objective for the already established *connections* and/or for the new *connection* requests. [ITU-T Recommendation I.113-702]

**connecting point:** a point inside a connection where two adjacent links come together. It is located within a level where the information is routed transparently; it provides the connecting functions. [ITU-T Recommendation I.113-508]

**Connection Admission Control (CAC):** the set of actions taken by the network at the call set up phase (or during call re-negotiation phase) in order to establish whether a virtual channel/virtual path connection can be accepted or rejected (or a request for re-allocation can be accommodated). Routing is part of connection admission control actions. [ITU-T Recommendation I.113-704]

**connection attribute, ISDN connection attribute:** a specified characteristic of an ISDN connection. [ITU-T Recommendation I.112-315]

NOTE 12: The value(s) assigned to one or more connection attributes may be used to distinguish that connection from others.

**connection element, ISDN connection element:** a part of an ISDN connection which has stated values of one or more ISDN connection attributes. [ITU-T Recommendation I.112-317]

**Connection End Point (CEP):** a point located at the level boundary (e.g. between VC level and VP level) where the level service is provided to the next higher level or to the management plane. The CEP provides the connection termination functions. [ITU-T Recommendation I.113-509]

**connection leg:** a connection leg of a point-to-multipoint connection is part of a connection between a destination endpoint and the previous branching connection point. If the leaf party connected to the connecting leg is leaving or being dropped, the connection leg is released.

**connection owner:** the party related to the root endpoint, who establishes the connection and as such owns the connection. The connection owner is the only party who may renegotiate the connection characteristics, add and drop new leaf endpoints and release the complete connection.

**connection type, ISDN connection type:** a part of an ISDN connection which has stated values of one or more ISDN connection attributes. [ITU-T Recommendation I.112-316]

**connection:** a connection provides for transfer of information between endpoints. [ITU-T Recommendation I.113-504 modified]

**connectionless service:** a service which allows the transfer of information between users without the need for end-to-end call establishment procedures. [ITU-T Recommendation I.113-105]

NOTE 13: Connectionless services may be used to support both *interactive* and *distributive services*.

**connectivity:** the capability to establish and maintain connections between networks and parts thereof.

**Constant Bit Rate (CBR) service:** a telecommunication service characterized by a service bit rate specified by a constant value. [ITU-T Recommendation I.113-103]

**continuity check:** mechanism to test the availability of a certain *link* or *connection*. Normally qualified to indicate the object being supervised; (e.g. VP continuity check). [ITU-T Recommendation I.113-614 modified]

**contribution, contribution application:** use of a broadband service or channel for transferring audio, video or other information to a user for further *post-production processing* and subsequent distribution. [ITU-T Recommendation I.113-111]

**control channel: C-channel (service channel):** additional dedicated transmission capability provided at a reference point or interface, or transported by a digital transmission system, to support the execution of management functions. [ITU-T Recommendation I.112-510]

NOTE 14: The control channel of a specific reference point, interface or type of transmission system is denoted by an appropriate suffix. For example:

- C\|d1:channel - the control channel at the V<sub>1</sub> interface;
- C\L: channel - the control channel at the line.

**conversational service:** an *interactive service* which provides for bi-directional *communication* by means of real-time (no store and forward) end-to-end information transfer from user to user. [ITU-T Recommendation I.113-114]

**cooperation:** the act of working mutually together for a common interest.

**customer equipment (subscriber installation):** the concatenation of equipment on the user side of the T reference point (i.e. TAs, TE2s, TE1s NT2 and associated transmission media). In the case of multiple access, the customer equipment on the user side of all those accesses comprising the multiple access. [ITU-T Recommendation I.112-430]

NOTE 15: This term should not imply or restrict ownership or responsibility for providing equipment.

NOTE 16: The terms "user equipment" and "subscriber equipment" are deprecated.

**deactivation:** a function which places a system, or part of a system, into a non-operating mode where the power consumption of the system may be decreased (low power consumption mode), [ITU-T Recommendation I.112-601]

**defect:** limited interruption of the ability of an item to perform a required function. It may or may not lead to maintenance actions depending on the results of additional analysis. [ITU-T Recommendation I.113-601]

**demand service, demand telecommunication service:** a type of telecommunication service in which the *communication* path is established almost immediately, in response to a user request by means of user-network *signalling*. [ITU-T Recommendation I.112-205]

**deterministic; ATM deterministic:** a mode of the *asynchronous transfer mode* in which a constant information transfer capacity expressed in terms of a predetermined limiting value for a given service is provided to the user throughout a call. [ITU-T Recommendation I.113-209]

**digital channel, digital transmission channel:** the means of unidirectional digital transmission of digital signals between two points. [ITU-T Recommendation I.112-109]

**digital circuit, digital telecommunication circuit:** a combination of two digital transmission channels permitting bidirectional digital transmission between two points, to support a single *communication*. [ITU-T Recommendation I.112-112]

NOTE 17: If the telecommunication is by nature unidirectional (for example: long distance television transmission), the term "digital circuit" is sometimes used to designate the single channel providing the facility.

NOTE 18: In a telecommunication network use of the term "digital circuit" is generally limited to a telecommunication circuit directly connecting two switching devices or exchanges, together with associated terminating equipment.

NOTE 19: A digital telecommunication circuit may permit transmission in both directions simultaneously (duplex) or not simultaneously (simplex).

NOTE 20: A digital telecommunication circuit that is used for transmission in one direction only is sometimes referred to as a unidirectional digital telecommunication circuit. A digital telecommunication circuit that is used for transmission in both directions (whether simultaneously or not) is sometimes referred to as a bidirectional digital telecommunication circuit.

**digital connection:** a concatenation of digital transmission channels or digital telecommunication circuits, switching and other functional units set up to provide for the transfer of digital signals between two or more points in a telecommunication network, to support a single *communication*. [ITU-T Recommendation I.112-310]

**digital exchange:** an *exchange* that switches digital signals by means of digital switching. [ITU-T Recommendation I.112-116]

**digital link, digital transmission link:** the whole of the means of digital transmission of a digital signal of specified rate between two digital distribution frames (or equivalent). [ITU-T Recommendation I.112-302]

NOTE 21: A digital link comprises one or more digital sections and may include multiplexing and/or demultiplexing, but not switching.

NOTE 22: The term may be qualified to indicate the transmission medium used, for example: "digital satellite link".

NOTE 23: The term always applies to the combination of "go" and "return" directions of transmission, unless stated otherwise.

NOTE 24: The term "digital path" is sometimes used to describe one or more digital links connected in tandem, especially between equipment at which the signals of the specified rate originate and terminate.

**digital network, integrated digital network:** a set of digital nodes and digital links that uses integrated transmission and switching to provide digital connections between two or more defined points to facilitate telecommunication between them. [ITU-T Recommendation I.112-306]

**digital section level:** extends between *digital section* end-points and comprises a maintenance entity. [ITU-T Recommendation I.113-513]

**digital section:** the whole of the means of digital transmission of a signal of specified rate between two digital distribution frames or equivalent. [ITU-T Recommendation I.113-502]

**digital signal:** a discretely-timed signal in which information is represented by a number of well-defined discrete values that one of its characteristic quantities may take in time. [ITU-T Recommendation I.112-105]

NOTE 25: The term may be qualified to indicate the digital rate, for example: "140 Mbit/s digital signal".

**digital switching node:** a node at which digital switching occurs. [ITU-T Recommendation I.112-304]

**digital switching:** *switching* by means that may assume in time any one of a defined set of discrete signal states, in order to convey digital signals. [ITU-T Recommendation I.112-114]

**digital transmission path:** the whole of the means of transmitting and receiving a digital signal of specified rate between two digital distribution *frames* (or equivalent) at which terminal equipment or switches will be connected. Terminal equipment are those at which the signal originates or terminates. A transmission path is connected through one or more *digital sections*. [ITU-T Recommendation I.113-501]

**digital transmission:** the transmission of digital signals by means of a channel or channels that may assume in time any of a defined set of discrete states. [ITU-T Recommendation I.112-107]

**direct access, direct connection element:** a specific access connection element in which the basic access digital section or primary rate access digital section is directly connected to the *exchange* termination at a  $V_1$  or  $V_3$  reference point respectively. [ITU-T Recommendation I.112-432]

**discretely-timed signal:** a signal composed of successive elements in time, each element having one or more characteristics which can convey information, for example, its duration, its waveform and its amplitude. [ITU-T Recommendation I.112-104]

**distribution service with user individual presentation control:** a *distribution service* in which the information is provided as sequence of information entities e.g. *frames* with cyclical repetition, so that the user has the ability to select individual information entities and can control the start and order of the information. [ITU-T Recommendation I.113-120]

**distribution service without user individual presentation control:** a *distribution service* which users can access without having any control over the start and order of the presentation of the distributed information. [ITU-T Recommendation I.113-121]

**distribution service:** service characterized by the unidirectional flow of information from a given point in the network to other (multiple) locations. Distribution services are subdivided into two classes: *distribution service without user individual presentation control* and *distribution service with user individual presentation control*. [ITU-T Recommendation I.113-119]

**distribution, distribution application:** use of a broadband service or channel for transferring audio, video or other information to a user or a number of users who will not be expected to apply *post-production processing* to the information. [ITU-T Recommendation I.113-110]

**domain:** the context within which an identifier (*name, number* etc.) is unique.

**downstream direction:** direction from the network towards the user.

**emulation:** *simulation* in real time.

**encapsulation:** the process by which a data unit is wrapped according to a special protocol in order to be transparently transferred through a network to its final destination.

**enhanced quality television:** television of a quality superior to *existing-quality television*, but less than the quality of high-definition television. [ITU-T Recommendation I.113-123]

**error check code:** specific result of the *error detection code* mechanism.

**Error Detection Code (EDC):** the mechanism for error detection of OAM *cells*. [ITU-T Recommendation I.113-615]

**exchange connection:** a *connection* that is established through an *exchange*. between the terminations on that *exchange*, of two or more channels or circuits. [ITU-T Recommendation I.112-313]

**Exchange Termination (ET):** the functional group containing at least the layer 2 and layer 3 network-side functions of the ITU-T Recommendation I.420 interface at the T reference point. [ITU-T Recommendation I.112-428]

NOTE 26: This may not be true if concentrators or other intelligent equipment are located in the local line distribution network.

NOTE 27: The ET is not the switching function. The extent to which the ET supports call control processing and management is not defined.

**exchange:** an aggregate of traffic carrying devices, switching stages, controlling and *signalling* means, and other functional units at a network node that enables subscriber lines, telecommunication circuits and/or other functional units to be interconnected as required by individual users. [ITU-T Recommendation I.112-115]

**existing quality television:** television as defined in conventional 625-line and 525-line standards such as NTSC, PAL and SECAM. [ITU-T Recommendation I.113-122]

**failure:** the termination of the ability of an item to perform a required function. [ITU-T Recommendation I.113-602]

**Far End Receive Failure (FERF):** specific type of alarm for *failure* reporting. It indicates that the *failure* has occurred at or near to the end of the line furthest from the transmitter. [ITU-T Recommendation I.113-616]

**fault localization:** determination by internal or external test systems of a failed entity [ITU-T Recommendation I.113-611 modified]

**fault management cell:** specific OAM *cell* used for *fault* management. Various types of *fault* management *cells* are defined related to specific functions; e.g. AIS, FERF, Continuity Check. [ITU-T Recommendation I.113-612]

**fault:** the inability of an item to perform a required function, excluding that inability due to preventive maintenance, lack of external resources, or planned actions. [ITU-T Recommendation I.113-603]

**feedback controls:** the set of actions taken by the network and by the users to regulate the traffic submitted on ATM connections according to the state of network elements.

**frame relay:** the transfer of data as a sequence of contiguous bits bracketed by and including beginning and end flag sequences. See *frame relaying bearer service*.

**frame relaying bearer service:** the *frame* relaying bearer service provides the bidirectional transfer of variable size Service Data Units (SDUs) from one S or T reference point to another with the order preserved. The SDUs are routed through the network by appropriate layer 2 Protocol Data Units (PDUs) on the basis of an attached label. [ITU-T Recommendation I.323]

**frame:** a *block* of variable length identified by a label at layer 2 of the OSI reference model, e.g. an HDLC *block*. [ITU-T Recommendation I.113-308]

**framed interface:** an interface where the serial bit stream is segmented into *periodic physical frames*. Each frame is divided by a fixed partition into an overhead and an *information payload* portion. [ITU-T Recommendation I.113-311]

**Function Element (FE):** a signal representing a functional exchange of layer 1 information at the V<sub>1</sub> interface. [ITU-T Recommendation I.112-509]

**function:** a set of processes defined for the purpose of achieving a specified objective. [ITU-T Recommendation I.112-403]

NOTE 28: Functions may be ordered in a logical hierarchy.

**functional group (functional grouping):** a set of functions that may be performed by a single equipment. [ITU-T Recommendation I.112-419]

**general broadcast signalling virtual channel:** a *virtual channel* independent of service profiles and used for broadcast *signalling*. [ITU-T Recommendation I.113-410]

**generic address:** an *address* which identifies a set of Network Service Access Points (NSAPs), rather than a single specific NSAP6. [ITU-T Recommendation X.213]

**Head End (HE):** equipment in an HFC access network, providing interfaces between the access network and one or more other networks, and providing an RF communication interface with user interface functions.

**header, cell header:** the bits within a *cell* allocated for functions required to transfer the *cell* payload within the network. [ITU-T Recommendation I.113-307]

**Hybrid Fiber Coax (HFC) access network:** *access network* using FDM transmission technology based on radio frequencies in which fibre links are used for the main distribution path, while coaxial links are used as the final link into the users premises. See also *CATV based access network*. [ITU-T Recommendation J.1 modified]

**hybrid interface structure:** an interface structure which has a mixture of *labelled channels* and *positioned channels*. [ITU-T Recommendation I.113-330]

**idle cell:** a *cell* which is inserted or extracted by the physical layer in order to adapt the *cell* flow rate at the boundary between the ATM layer and the physical layer to the available payload capacity of the transmission system.

**in-slot signalling:** *signalling* associated with a channel and transmitted in a digit time-slot permanently (or periodically) allocated in the channel time-slot. [ITU-T Recommendation I.112-504]

**INFO:** a defined layer 1 signal with specified meaning and coding at a basic access user-network interface. [ITU-T Recommendation I.112-507]

**information payload capacity:** the difference between the *interface rate* and the *interface overhead rate*, that is the bit rate of the *interface payload*. [ITU-T Recommendation I.113-315]

**integrated digital transmission and switching:** the direct (digital) concatenation of digital transmission and digital switching, that maintains a continuous digital transmission path. [ITU-T Recommendation I.112-117]

**Integrated Services Digital Network (ISDN):** an integrated services network that provides digital connections between user-network interfaces. [ITU-T Recommendation I.112-308]

**integrated services network:** a network that provides or supports a range of different telecommunication services. [ITU-T Recommendation I.112-307]

**Inter Network Interface (INI):** see Network Node Interface (NNI)<sup>3</sup>.

**interaction:** mutual or reciprocal action or influence.

**interactive service:** a service which provides the means for bidirectional exchange of information between users or between users and hosts. Interactive services are subdivided in three classes of services: *conversational services*, *messaging services* and *retrieval services*. [ITU-T Recommendation I.113-113]

**interchange medium:** the type of means to interchange data between systems can be either a *storage medium*, a *transmission medium* or a combination. [ITU-T Recommendation I.374]

**interconnection:** the physical and logical linking of telecommunication networks allowing users of one organization to communicate with users of another organization or to access services provided by another organization.

**interface overhead:** the remaining portion of the bit stream after deducting the *information payload*. The *interface overhead* may be essential (e.g. framing for an interface shared by users) or ancillary (e.g. performance monitoring). [ITU-T Recommendation I.113-313]

**interface payload:** the portion of the bit stream of a *framed interface* which can be used for telecommunication services. Any *signalling* is included in the *interface payload*. [ITU-T Recommendation I.113-312]

**interface rate; interface bit rate:** the gross bit rate at an interface, that is, the sum of the bit rates of the *interface payload* and the *interface overhead*. Example: the bit rate at the boundary between the physical layer and the physical medium. [ITU-T Recommendation I.113-314]

**interface specification:** a formal statement of the type, quantity, form and other of the interconnections and interactions between two associated systems, at their interface. [ITU-T Recommendation I.112-412]

**interface structure, ISDN user-network interface structure:** the number and type of the access channels that appear at an ISDN user-network interface. [ITU-T Recommendation I.112-415]

**interface:** the common boundary between two associated systems. [ITU-T Recommendation I.112-408]

**interoperability:** the capability to provide successful communication between end-users across a mixed environment of different domains, networks, facilities, equipment etc.

**interworking:** interactions between networks, between end systems, or between parts thereof, with the aim of providing a functional entity capable of supporting an end-to-end *communication*. [ITU-T Recommendation I.510]

**invalid cell:** a *cell* where the header by the header error control process is declared to contain errors. [ITU-T Recommendation I.113-317]

**ISDN connection:** a connection that is established through an ISDN between specified ISDN interfaces. [ITU-T Recommendation I.112]

**ISDN customer access (ISDN subscriber access):** the equipment providing the concatenation of all functional groups relevant to an individual or group of related access connection elements (i.e. customer equipment and access connection element). [ITU-T Recommendation I.112-431]

NOTE 29: This term should not imply or restrict ownership or responsibility for providing equipment.

**labelled channel:** a temporally-ordered collection of all *block payloads* having a common label value. [ITU-T Recommendation I.113-322]

**labelled deterministic channel:** a *labelled channel* with the property that the aggregated payload capacity of all *blocks* in each successive interval of specified constant duration is a constant. [ITU-T Recommendation I.113-323]

**labelled interface structure:** an interface structure in which all services and *signalling* is provided by *labelled channels*. A *labelled interface structure* can be accommodated within a *framed interface* or a *self-delineating labelled interface*. [ITU-T Recommendation I.113-327]

**labelled multiplexing:** the multiplexing of *labelled channels* by concatenating the *blocks* of the different channels. [ITU-T Recommendation I.113-325]

**labelled statistical channel:** a *labelled channel* in which the payload of the successive *blocks* of the channel is random and/or the *block* durations are random. [ITU-T Recommendation I.113-324]

**layer (level):** a conceptual region that embodies one or more functions between an upper and a lower logical boundary within a hierarchy of functions. [ITU-T Recommendation I.112-404]

NOTE 30: The open System Interconnection (OSI) reference model has seven layers.

**layer interface:** the interface between adjacent layers of hierarchy of layers. [ITU-T Recommendation I.112-410]

**leaf end point:** the endpoint of a point-to-multipoint connection or a multipoint-to-point connection only connected to the root endpoint.

**leaf party:** a destination party in a point-to-multipoint connection or in a multipoint-to-point connection. A leaf party is not allowed to release the complete connection, but may disconnect itself from the connection.

**level:** the term level is used when describing the hierarchical structure of a network from a transport viewpoint. [ITU-T Recommendation I.113-511 modified]

**line activation:** the function which requires the digital line transmission system to be activated but which may also activate the user-network interface. [ITU-T Recommendation I.112-604]

**Line Termination (LT):** the functional group containing at least the transmit and receive functions terminating one end of a digital transmission system. [ITU-T Recommendation I.112-427]

**line-only activation:** the function which requires the activation of only the digital line transmission system and does not activate the user-network interface. [ITU-T Recommendation I.112-605]

**link connection:** a transport entity provided by the client/server association. It is formed by near-end adaptation function, a server trail and a far end adaptation function between *connection* points. It can be configured as part of the trail management process in the associated server layer. [ETS 300 469]

**link, transmission link:** a means of transmission with specified characteristics between two points. [ITU-T Recommendation I.112-301]

NOTE 31: The type of transmission path or the capacity is normally indicated, e.g. radio link, coaxial link, or 2 048 kbit/s link.

**link:** a topological component which describes the fixed relationship between a *sub-network* and another *sub-network* or access group. [ETS 300 469]

**local exchange, ISDN local exchange:** the *exchange* which, in addition to the switching function, contains the *exchange* termination for the ISDN customer accesses. [ITU-T Recommendation I.112-118]

**logical signalling channel:** a logical channel for *signalling* information which is contained within an information channel or a *physical signalling channel*. [ITU-T Recommendation I.113-408]

**logical user port:** the set of VPs at the UNI associated with one single VB5 reference point. (for further study)

**maintenance event:** an instantaneous maintenance occurrence that changes the global status of an object. [ITU-T Recommendation I.113-608]

**managed entity:** a physical or logical resource that is to be managed. [ITU-T Recommendation I.113-606]

**management entity:** an entity capable of providing management functions (e.g. operation, administration, maintenance and provisioning). [ITU-T Recommendation I.113-605]

**map:** to map (over) is to establish a defined correspondence with the quantities or values of another set. [ITU-T Recommendation Q.9]

**maximum bit rate:** the maximum bit rate corresponds to the maximum usable transfer bit rate from the users standpoint. [ETS 300 780]

**mean bit rate:** the mean bit rate correspond to the average usable transfer bit rate from the users standpoint. [ETS 300 780]

**medium (plural media):** a means by which information is perceived, expressed, stored or transmitted. The term "media" has many meanings depending on the context in which it is used. For unambiguous usage the term should always be accompanied by one of the following expressions: *perception medium*, *representation medium*, *presentation medium*, *storage medium*, *transmission medium*. [ITU-T Recommendation I.374]

**merging connection point:** a connection point merging  $n$  to 1 connection links.

**message mode:** a mode of service offered by the AAL type 3/4 and 5, where the AAL SDU is passed across the AAL interface in exactly one AAL IDU. [ITU-T Recommendation I.113-523]

**messaging service:** an *interactive service* which offers user-to-user *communication* between individual users via storage units with store-and-forward, mailbox and/or message handling, (e.g. information editing, processing and conversion) functions. [ITU-T Recommendation I.113-115]

**meta-signalling:** the procedure for establishing, checking and releasing *signalling virtual channels*. [ITU-T Recommendation I.113-411]

**mixed document:** a document that may contain text, graphics, data, image and moving picture information as well as voice annotation. [ITU-T Recommendation I.113-106]

**monitoring cell:** specific *OAM cell* used for performance monitoring. [ITU-T Recommendation I.113-610]

**multicast communication:** unidirectional *communication* from a single source access point to a limited number (more than one) of specified destination access points. [ITU-T Recommendation I.140]

**multicast connection:** unidirectional connection between one (source) endpoint and a limited number (more than one) of specified destination endpoints. [ITU-T Recommendation I.140]

**multicast:** unidirectional *communication* from a single source entity to a limited number of specified destination entities.

**multiconnection call:** a *call* which is supported by two or more *connections* between the users.

**multimedia call:** a call which offers a *multimedia service*.

**multimedia service:** a service in which the interchanged information consists of more than one type, such as text, graphics, sound, image and video. [ITU-T Recommendation I.113-107]

**multimedia:** the property of a piece of information, an application or user equipment, to handle several types of data. Multimedia is an adjective and must be attached to a noun to define a precise context, e.g. multimedia service, multimedia network, multimedia application. [ITU-T Recommendation I.374]

**multiparty call:** a call in which three or more users are involved.



**multiparty multiconnection call:** a call that has both multiparty and multiconnection characteristics.

**multiport access:** user access in which more than one terminal equipment is supported by a single network termination. [ITU-T Recommendation I.112-422]

**multiport-to-multiport communication:** bidirectional asymmetric or bidirectional symmetric communication from multiple source access points to multiple destination access points, e.g. conference communication. [ITU-T Recommendation I.140]

**multiport-to-multiport connection:** connection between multiple (source) endpoints and multiple (destination) endpoints for bidirectional asymmetric or bidirectional symmetric *communication*. [ITU-T Recommendation I.140]

**multiport-to-point communication:** bidirectional asymmetric, bidirectional symmetric or unidirectional communication from multiple (source) access points to a single (destination) access point, e.g. polling station (and in reverse direction). [ITU-T Recommendation I.140]

**multiport-to-point connection:** connection between multiple (source) endpoints and a single (destination) endpoint for bidirectional asymmetric, bidirectional symmetric or unidirectional *communication*. [ITU-T Recommendation I.140]

**multiport:** a *communication* configuration attribute which denotes that the *communication* involves more than two network terminations. [ITU-T Recommendation I.113-109 modified]

**name:** identification of an object. In telecommunications names are used to distinguish *communication* entities: the significance of a name is related to the domain in which it is used.

**network charging capabilities:** a set of actions and procedures performed by the network in order to determine all the network parameters of a *communication*, which are required for account management, and to determine the values of these parameters.

**network connection:** a transport entity formed by the series of *connections* between termination connection points. [ETS 300 469]

**network determined user busy:** refers to the situation where the network has determined that resources required to complete the call on the called users access interface are not currently available. [ETS 300 780]

**Network Node Interface (NNI):** the interface at a network node which is used to interconnect with another network node. An NNI connecting two nodes in different networks is sometimes referred to as an Inter Network Interface (INI).

**network operator:** entity which provides the network operating elements and resources for the actual execution of services. [ETS 300 780]

**Network Parameter Control (NPC):** the set of actions taken by the network to monitor and control traffic at the inter Network Node Interface, to protect network resources from malicious as well as unintentional misbehaviour by detecting violations of negotiated parameters and taking appropriate actions. [ITU-T Recommendation I.113-706]

**Network Termination (NT):** the functional group on the network side of a user-network interface. [ITU-T Recommendation I.112-418]

NOTE 32: In ITU-T Recommendation I.430 and I.431, "NT" is used to indicate network terminating layer 1 aspects of NT1 and NT2 functional groups.

**network:** a set of nodes and links that provides connections between two or more defined points to facilitate telecommunication between them. [ITU-T Recommendation I.112-305]

**node, switching node:** a point at which switching occurs. [ITU-T Recommendation I.112-303]

NOTE 33: The term "node" is sometimes used to refer to a point at which circuits are interconnected by means other than switching. In such a case a suitable qualification should be used, for example: "synchronization node".

**non-switched connection element, non-switched ISDN connection element:** an ISDN connection element that is established without switching. [ITU-T Recommendation I.112-319]

**non-switched connection:** a connection that is established without the use of switching, for example by means of hard-wired joints. [ITU-T Recommendation I.112-312]

**number:** a *name* expressed as a string of digits. In some cases it may contain location information.

**OAM cell:** a *cell* that carries OAM information for the performing of specific OAM functions. The term maintenance *cell* is often used as synonym for OAM cell. [ITU-T Recommendation I.113-609]

**OAM flow:** bidirectional information flow for the performance of OAM functions in the network. [ITU-T Recommendation I.113-613]

**OAM level:** the OAM functions are organized in five OAM hierarchical levels associated with the ATM and the Physical Layer, to which correspond five OAM flows. [ITU-T Recommendation I.113-512]

**one-step activation:** a type of activation which invokes a sequence of actions to activate the digital line transmission system and user-network interface from a single command. [ITU-T Recommendation I.112-606]

**one-step deactivation:** deactivation of the digital line transmission system and user-network interface invoked by a single command. [ITU-T Recommendation I.112-608]

**out-slot signalling:** *signalling* associated with a channel and transmitted in one or more separate digit time-slots not within the channel time-slot. [ITU-T Recommendation I.112-505]

**packet transfer mode:** a *transfer mode* in which the transmission and switching functions are achieved by *packet* oriented techniques, so as to dynamically share network transmission and switching resources between a multiplicity of connections. [ITU-T Recommendation I.113-208]

**packet:** an information *block* identified by a label at layer 3 of the OSI reference model. [ITU-T Recommendation I.113-207]

**payload module:** that portion of the *information payload*, of an interface, within which one or more channels entirely exist. [ITU-T Recommendation I.113-316]

**Payload Type Identifier (PTI):** a 3-bit field in the ATM *cell* header identifying the type of payload.

NOTE 34: The use of this identifier is specified in ITU-T Recommendation I.361.

**perception medium:** the nature of the information as perceived by the user. [ITU-T Recommendation I.374]

**performance management cell:** a specific *OAM cell* used for *performance management*. [ITU-T Recommendation I.113-618 modified]

**performance management:** a set of management functions which enable the performance of the network services to be measured and corrective actions to be taken. [ITU-T Recommendation I.113-617]

**performance monitoring:** the action of continuous or periodic checking of a managed entity to test its normal functioning. [ITU-T Recommendation I.113-619]

**periodic frame:** a transmission segment which is repeated at intervals of equal duration (e.g. 125 us), and may be delineated by incorporating fixed periodic patterns into the bit stream. [ITU-T Recommendation I.113-310]

**permanent activation:** activation of a system, or part of a system, that will not be deactivated even it is not required to be fully operating. [ITU-T Recommendation I.112-603]

**permanent circuit service, permanent circuit telecommunication service:** a type of telecommunication service in which the *communication* path is established in response to a customer request effected by means of an operational or administrative message. [ITU-T Recommendation I.112-207]

NOTE 35: Release of the communication path is effected in a similar way to its establishment.

**personal mobility:** the ability of a user to access telecommunication services at any terminal on the basis of a personal identifier, and the capability of the network to provide those services according to the user's service profile. [ITU-T Recommendation I.114-102]

NOTE 36: *Personal mobility* involves the network capability to locate the terminal associated with the user for the purposes of addressing, routing and charging of the user's calls.

**physical frame:** a segment of a serial logical bit stream at an interface, partitioned into successive segments. [ITU-T Recommendation I.113-309]

**physical interface specification (physical interface):** a formal statement of the mechanical, electrical, electromagnetic and optical characteristics of the interconnections and interactions between two associated equipments, at their interface. [ITU-T Recommendation I.112-413]

**physical interface:** the interface between two equipments. [ITU-T Recommendation I.112-411]

**physical signalling channel:** a dedicated physical channel (e.g. D-channel) used for *signalling* information, It may be used to carry other information. [ITU-T Recommendation I.113-407]

**point-to-multipoint communication:** bidirectional asymmetric or bidirectional symmetric communication from one (source) access point to multiple (destination) access points (and in reverse direction). [ITU-T Recommendation I.140]

**point-to-multipoint connection:** connection between one (source) endpoint and multiple (destination) endpoints for bidirectional asymmetric or bidirectional symmetric *communication*. [ITU-T Recommendation I.140]

**point-to-multipoint ISDN connection:** an ISDN connection that is established between a single specified ISDN interface, and more than one other specified ISDN interface. [ITU-T Recommendation I.112-320]

**point-to-point ISDN connection:** an ISDN connection that is established between two specified ISDN interfaces. [ITU-T Recommendation I.112-320]

**positioned channel:** a channel that occupies bit positions which form a fixed periodic pattern (e.g. B- H- and D-channels in ISDN user network interfaces). [ITU-T Recommendation I.113-328]

**positioned interface structure:** a structure in which all services and *signalling* are provided by *positioned channels*. Such a structure can exist only within a *framed interface*. [ITU-T Recommendation I.113-329]

**post-production processing:** further processing of contributed audio and video information, to change the form or presentation of the information prior to its final utilization. [ITU-T Recommendation I.113-112]

**presentation medium:** the type of physical means which is used to reproduce information to the user (output device) or the acquired information from the user (input device). [ITU-T Recommendation I.374]

**primary rate access:** an ISDN user access arrangement that corresponds to the primary rates of 1 544 kbit/s and 2 048 kbit/s. The bit rate of the D-channel for this type of access is 64 kbit/s. The typical primary rate interface structures are as given in ITU-T Recommendation I.412 and I.431. [ITU-T Recommendation I.112 modified]

**primitive:** see service primitive.

**protocol:** a formal statement of the procedures that are adopted to ensure *communication* between two or more functions within the same layer of a hierarchy of functions. [ITU-T Recommendation I.112-405]

**reference configuration:** a combination of functional groups and reference points that shows possible network arrangements. [ITU-T Recommendation I.112-421]

**reference point:** a conceptual point at the conjunction of two non-overlapping functional groups. [ITU-T Recommendation I.112-420]

NOTE 37: Each reference point is assigned a prefix letter, for example: T reference point.

**regenerator section level:** extends between regenerator section endpoints. [ITU-T Recommendation I.113-514]

**regenerator section:** portion of a *digital section*. (It is a maintenance sub-entity). [ITU-T Recommendation I.113-503]

**remote access, remote access connection element:** a specific access connection element in which the digital section is not directly connected to the *exchange* termination but is connected through a multiplexer or concentrator. [ITU-T Recommendation I.112-433]

**representation medium:** the type of the interchanged data, which defines the nature of the information as described by its coded form. [ITU-T Recommendation I.374]

**reserved circuit service, reserved circuit telecommunication service:** a type of telecommunication service in which the *communication* path is established at a time specified in advance by the user, in response to a user request effected by means of user-network *signalling*. [ITU-T Recommendation I.112-206]

NOTE 38: The duration of communication, or the time of release of the communication path, may also be specified in advance by the user.

**retrieval service:** an *interactive service* which provides the capability of accessing information stored in data base centres. This information will be sent to the user on demand only. The information can be retrieved on an individual basis, i.e. the time at which an information sequence is to start is under control of the user. [ITU-T Recommendation I.113-117]

**root endpoint:** endpoint of a point-to-multipoint connection or a multipoint-to-point connection to which all other endpoints are connected.

**route:** a path through one or more networks between connection endpoints.

**routing:** a set of instructions on how to reach a destination.

**selective broadcast signalling virtual channel:** a *virtual channel* allocated to a service profile and used for broadcast *signalling*. [ITU-T Recommendation I.113-411]

**self-delineating block:** a *block* with the property that its endpoints can be identified by examining the block itself. A defined pattern or flag at the beginning of each block might serve to demarcate the block. [ITU-T Recommendation I.113-302]

**self-delineating labelled interface:** an interface whose entire bit stream consists of a self delineating *labelled multiplexing*. [ITU-T Recommendation I.113-326]

**Service Access Point (SAP):** the point at which services are provided by a layer to the next higher layer.

**service attribute, telecommunication service attribute:** a specified characteristic of a telecommunication service. [ITU-T Recommendation I.112-208]

NOTE 39: The value(s) assigned to one or more service attributes may be used to distinguish that telecommunication service from others.

**service bit rate:** the bit rate which is available to a user for the transfer of user information. [ITU-T Recommendation I.113-102]

**service component:** a part of a service which describes a monomedium *communication* related to a single information type.

**service control element:** the primitives needed to control a multimedia service, for example to start a call, to add or release a service component. [ITU-T Recommendation I.374]

**Service Data Unit (SDU):** the block of user information data passed at the source service access point as part of the service primitive. The exact definition of the SDU length and structure is specific for every service subcategory.

**Service Node (SN):** a network element that provides access to various switched and/or permanent telecommunication services. In case of switched services the SN is providing access call and connection control signalling, and access connection and resource handling. [ITU-T Recommendation G.902]

**Service Node Interface (SNI):** the interface between an *access network* and a *service node*.

**service primitive:** the smallest defined interaction between a service user and the *service provider*. [ITU-T Recommendation T.431]

**service profile management; UPT service profile management:** the ability to access and manipulate the *UPT service profile*: [ITU-T Recommendation I.114-108]

NOTE 40: UPT service profile management can be performed by the UPT user, UPT customer or UPT service provider.

**service profile, UPT service profile:** a record containing all the information related to a *UPT user* in order to provide that user with the *UPT service*. [ITU-T Recommendation I.114-107]

NOTE 41: Each *UPT service profile* is associated with a single *UPT number*.

**service profile:** a collection of information maintained by the network characterizing a set of services provided by the network to a user.

**service provider:** entity which offers services for service subscription. The network operator may be the service provider. [ETS 300 780]

**service subscriber:** entity which subscribes to a service offered by the service provider. [ETS 300 780]

**service, telecommunication service:** that which is offered by an Administration or ROA to its customers in order to satisfy a specific telecommunication requirement. [ITU-T Recommendation I.112-201]

NOTE 42: Bearer service and teleservice are types of telecommunication service. Other types of telecommunication service may be identified in the future.

**SIG:** a signal representing an exchange of layer 1 information between line terminations of a digital transmission system for basic access. [ITU-T Recommendation I.112-508]

**signal:** a physical phenomenon one or more of whose characteristics may vary to represent information. [ITU-T Recommendation I.112-102]

**Signalling Virtual Channel (SVC):** a *virtual channel* for transporting *signalling* information. [ITU-T Recommendation I.113-409]

**signalling:** the exchange of information specifically concerned with the establishment and control of connections, and with management, in a telecommunication network. [ITU-T Recommendation I.112-501]

**simple call:** two party call supported by one *connection*. The *connection* can be unidirectional or bidirectional.

**simulation:** imitation of the characteristics and appearance of a particular function.

**sound retrieval service:** on-demand (user initiated) retrieval of music and other audio information. [ITU-T Recommendation I.113-118]

**source traffic descriptor:** a set of traffic parameters belonging to the ATM traffic descriptor, which is used during the *connection* set-up to capture the intrinsic traffic characteristics of the *connection* requested by the source. [ITU-T Recommendation I.113-709]

**speech digit signalling:** a type of channel-associated *signalling* in which digit time-slots primarily used for the transmission of encoded speech are periodically used for *signalling*. [ITU-T Recommendation I.112-506]

**splitting point:** a connecting point splitting 1 to n connection links.

**statistical; ATM statistical:** a mode of the *asynchronous transfer mode* in which the information transfer capacity specified for a given service provided to the user throughout a call is expressed in terms of values of parameters such as mean, peak and standard deviation. [ITU-T Recommendation I.113-210]

**storage medium:** the type of physical means to store data. [ITU-T Recommendation I.374]

**streaming mode:** a mode of service offered by the AAL type 3/4 and 5, where the AAL SDU is passed across the AAL interface in one or more AAL IDUs. [ITU-T Recommendation I.113-524]

**Structured Data Transfer (SDT):** the SDT supports the transmission of structured data (blocks of user data organized in octets) by using a pointer to the start of a block. [ETS 300 353]

**sub-network connection:** a transport entity formed by a *connection* across a sub-network between connection points. It can be configured as part of the trail management process. [ETS 300 469]

**sub-network:** a topological component used to effect routing and management. It describes the potential for sub-network connections across the sub-network. It can be partitioned into interconnected sub-networks and *links*. Each sub-network in turn can be partitioned into smaller sub-networks and *links* and so on. A sub-network may be contained within one physical node. [ETS 300 469]

**switched connection element, switched ISDN connection element:** an ISDN connection element that is established by means of switching. [ITU-T Recommendation I.112-318]

**switched connection:** a connection that is established by means of switching. [ITU-T Recommendation I.112-311]

NOTE 43: A switched connection may be used to support both demand and reserved circuit services.

**switching:** the process of interconnecting functional units, transmission channels or telecommunication circuits for as long as is required to convey signals. [ITU-T Recommendation I.112-113]

**synchronous time division multiplexing:** a multiplexing techniques supporting the *synchronous transfer mode (STM)*. [ITU-T Recommendation I.113-203]

**Synchronous Transfer Mode (STM):** a *transfer mode* which offers periodically to each *connection* a fixed-length word. [ITU-T Recommendation I.113-205]

**system protection:** the action of minimizing the effect of a managed entity by blocking or changeover to other entities. (As a result the failed entity is excluded from operation). [ITU-T Recommendation I.113-607]

**teleaction service (telemetry service):** a type of telecommunication service that uses short messages, requiring a very low transmission rate, between the user and the network. [ITU-T Recommendation I.112-204]

NOTE 44: Examples of teleaction services are: telealarm, telecommand, telealerting.

**telecommunication network:** a set of nodes and links that provides connections between 2 or more defined ports to facilitate telecommunication between them. [ITU-T Recommendation I.112-305] See *network*.

**telecommunication:** any transmission and/or emission and reception of signals representing signs, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems. [ITU-T Recommendation I.112-110]

**teleservice (telecommunication service):** a type of telecommunication service that provide the complete capability, including terminal equipment functions, for *communication* between users according to protocols established by agreement between Administrations and/or RPAs. [ITU-T Recommendation I.112-203]

**Terminal Equipment (TE):** the functional group on the user side of a user-network interface. [ITU-T Recommendation I.112-417]

NOTE 45: In ITU-T Recommendation I.430 and I.431, "TE" is used to indicate terminal terminating layer 1 aspects of TE1, TA and NT2 functional groups.

**terminal mobility:** the ability of a terminal to access telecommunication services from different locations and while in motion, and the capability of the network to identify and locate that terminal. [ITU-T Recommendation I.114-101]

**throughput:** the number of data bits contained in a *block* (e.g. between the address field and the CRC field of the LAPD-based *frames*) successfully transferred in one direction across a section per unit time. [ITU-T Recommendation I.113-303]

**traffic contract:** the requested QOS for any given ATM connection and the maximum CDV tolerance allocated to the CEQ. [ITU-T Recommendation I.113-710]

**traffic control:** the set of actions taken by the network in all relevant network elements to avoid *congestion* conditions. [ITU-T Recommendation I.113-701]

**traffic descriptor:** the definition of the characteristic of the traffic that any given requested *connection* may offer. [ITU-T Recommendation I.113-707]

**traffic parameter:** a specification of a particular traffic aspect of an ATM connection.

**traffic routing:** the establishment of a successful connection between any two *exchanges* or connectionless servers in the network.

**traffic shaping:** a mechanism that may alter the pattern of an ATM stream of *cells* on a VPC or a VCC to achieve desired modification of traffic characteristics, maintaining *cell* sequence integrity of the connection.

**transfer mode:** mechanism for transmission, multiplexing and switching in a telecommunications network. [ITU-T Recommendation I.113-201 modified]

**transit delay:** the time difference between the instant at which the first bit of the *address* field of a *frame* crosses one designated boundary, and the instant at which the last bit of the closing flag of the *frame* crosses a second designated boundary. [ITU-T Recommendation I.113-801]

**transmission medium:** the type of physical means to transmit data. [ITU-T Recommendation I.374]

**transmission path level:** extends between network elements assembling/disassembling the payload of a transmission system and associating it with its OAM functions. [ITU-T Recommendation I.113-512]

**transmission:** the action of conveying signals from one point to one or more points. [ITU-T Recommendation I.112-106]

NOTE 46: Transmission can be effected directly or indirectly, with or without intermediate storage.

NOTE 47: The use of the English word "transmission" in the sense of "emission" is deprecated.

**two-party call:** a call in which exactly two users are involved.

**two-step activation:** a type of activation which is initiated by one command to invoke a sequence of actions to activate the digital line transmission system and continued by a second command to invoke a sequence of actions to activate the user-network interface. [ITU-T Recommendation I.112-607]

**unassigned cell (ATM layer):** ATM layer *cell* which is not an assigned *cell*.

**Universal Personal Telecommunication (UPT) service:** a service which provides *personal mobility* and *UPT service profile management*. [ITU-T Recommendation I.114-103]

NOTE 48: This involves the network capability of uniquely identifying a *UPT user* by means of a *UPT number*.

NOTE 49: The general principles of universal personal telecommunication are given in ITU-T Recommendation F.850 "Principles of universal personal telecommunication".

**Universal Personal Telecommunication Number (UPTN):** a number that uniquely identifies a *UPT number* and is used to place, or forward, a call to that user. [ITU-T Recommendation I.114-106]

NOTE 50: A user may have more than one *UPT number* (for example a business *UPT number* for business calls and a private *UPT number* for private calls). In that case, from a network point of view, each *UPT number* is considered to identify a distinct *UPT user*, even if they all happens to identify the same person or entity.

**upstream direction:** direction from the user towards the network.

**UPT customer (UPT subscriber):** a person who, or entity which, obtains a *UPT service* from a UPT service provider on behalf of one or more *UPT users* and is responsible for payment of the charges due to that service provider. [ITU-T Recommendation I.114-104]

NOTE 51: The general terms "customer" is defined in ITU-T Recommendation D.000 "Terms and definitions for the Series D Recommendations".

**UPT routing address:** a number used by the network to direct a call according to the user's *UPT profile*. [ITU-T Recommendation I.114-110]

**UPT user:** a person who, or entity which, has access to *universal personal telecommunication (UPT)* services and has been assigned a *UPT number*. [ITU-T Recommendation I.114 modified].

**Usage Parameter Control (UPC):** the set of actions taken by the network to monitor and control traffic at the User Network Interface, to protect network resources from malicious as well as unintentional misbehaviour by detecting violations of negotiated parameters and taking appropriate actions. [ITU-T Recommendation I.113-705]

**user access, user-network access:** the means by which a user is connected to a telecommunication network in order to use the services and/or facilities of that network. [ITU-T Recommendation I.112-402]

**user determined user busy:** refers to the case where the user chooses to indicate the busy condition. Busy conditions are described in ITU-T Recommendation I.221. [ETS 300 780]

**User Network Interface (UNI):** the interface at which a customer equipment is connected to a network. It is related to one or more physical interfaces at the reference points T, S, S/T.

**user, user of a telecommunication network:** a person or machine delegated by a customer to use the service facilities of a telecommunication network. [ITU-T Recommendation I.112-401]

**user-network interface only deactivation:** deactivation of the user-network interface which does not deactivate the digital line transmission system. [ITU-T Recommendation I.112-609]

**user-network interface:** the interface between the terminal equipment and a network termination at which interface the access protocols apply. [ITU-T Recommendation I.112-409]

**user-user protocol:** a protocol that is adopted between two or more users in order to ensure *communication* between them. [ITU-T Recommendation I.112-407]

**user:** entity which actually uses the service. [ETS 300 780]

**valid cell:** a *cell* where the header is declared by the header error control process to be free of errors. [ITU-T Recommendation I.113-318]

**Variable Bit Rate (VBR) service:** a type of telecommunication service characterized by a service bit rate specified by statistically expressed parameters which allow the bit rate to vary within defined limits. [ITU-T Recommendation I.113-104]

**VC connection:** a concatenation of *virtual channel links* that extends between two points where the adaptation layer is accessed. [ITU-T Recommendation I.113-403]

**VC cross connect:** a network element which connects *VC links*; it terminate *VPCs* and translates *VCI* values and is directed by Management Plane functions. [ITU-T Recommendation I.113-519]

**VC level:** extends between network elements performing *virtual channel connection* termination functions, and it is shown extending through one or more *virtual path connections*. [ITU-T Recommendation I.113-516]

**VC link:** a mean of unidirectional transport of *ATM cells* between a point where a *virtual channel identifier* value is assigned and the point where that value is translated or removed. [ITU-T Recommendation I.113-402]

**VC switch:** a network element which connects *VC links*; it terminates *VPCs* and it translates *VCI* values. It is directed by control plane functions. [ITU-T Recommendation I.113-520]

**videomessaging:** a *messaging service* for the transfer of moving pictures with or without other information. [ITU-T Recommendation I.113-116]

**Virtual Channel (VC):** a concept used to describe unidirectional transport of *ATM cells* associated by a common unique identifier value. [ITU-T Recommendation I.113-401]

**Virtual Channel Identifier (VCI):** identifies a particular *VC link* for a given Virtual Path Connection (VPC).

**Virtual Path (VP):** a concept used to describe unidirectional transport of *ATM cells* belonging to *virtual channels* that are associated by a common identifier value. [ITU-T Recommendation I.113-404]

**Virtual Path Connection (VPC):** a concatenation of *virtual path links* that extends between the point where the *virtual channel* identifier values are assigned and the point where those values are translated or removed. [ITU-T Recommendation I.113-406]

**Virtual Path Identifier (VPI):** identifies a group of *VC links*, at a given reference point, that share the same VPC.



**VP cross connect:** a network element which connects VP links; it translates VPI values and is directed by management plane function. [ITU-T Recommendation I.113-517]

**VP level:** extends between network elements performing *virtual path connection* termination functions, and it is shown extending through one or more *virtual path connections*. [ITU-T Recommendation I.113-515]

**VP link:** the group of *virtual channel links*, identified by a common value of the *virtual path* identifier, between the point where the VPI value is assigned and the point where the VPI value is translated or removed. [ITU-T Recommendation I.113]

**VP switch:** a network element which connects VP links; it translate VPI values and is directed by Control Plane functions. [ITU-T Recommendation I.113-518]

**VP-VC cross connect:** a network element that may act as VC cross-connect and/or and VP cross-connect. [ITU-T Recommendation I.113-521]

**VP-VC switch:** a network element that may act as VC switch and/or VP switch. [ITU-T Recommendation I.113-522]

## 5 Abbreviations and acronyms

AAL-CU	AAL Composite User (obsolete, now = AAL2)
AAL	ATM Adaptation Layer
AAL-IDU	AAL Interface Data Unit
AAL-PCI	AAL Protocol Control Information
AAL-SDU	AAL Service Data Unit
AATF	ATM Access Termination Functions
ABR	Available Bit Rate
ABT	ATM Block Transfer
ACE	Access Connection Element
ACF	ATM Control Functions
ACTS	Advanced Communications Technologies and Services
ADSL	Asymmetric Digital Subscriber Line
AFI	Authority and Format Identifier
AIS	Alarm Indication Signal
AL	Access Link
AL	Alignment
AMF	ATM Mapping Functions
AMIMF	ATM based MSS Interconnection Management Functions
ANTF	ATM Network Termination Functions
AOC	Advice Of Charge
ATAF	ATM Transit Access Functions
ATC	ATM Transfer Capabilities
ATD	Asynchronous Time Division
ATF	Access Termination Functions
ATM	Advanced Television Markets
	Asynchronous Transfer Mode
ATMNE	ATM Network Element
ATM-SDU	ATM Service Data Unit
AU	Administrative Unit
AUU	ATM-layer-user-to-ATM-layer-user
BAsize	Buffer Allocation size
BC	Bearer Control
BCD	Binary Coded Decimal
BCDBS	Broadband Connectionless Data Bearer Service
BCOBS	Broadband Connection Oriented Bearer Service
BER	Bit Error Ratio
BIP	Bit Interleaved Parity
B-ISDN	Broadband Integrated Services Digital Network
B-ISPBX	Private Branch Exchange for B-ISDN
B-ISUP	B-ISDN User Part

BM	Business Management
B-NT	Network Termination for B-ISDN
B-NT1	Network Termination 1 for B-ISDN
B-NT2	Network Termination 2 for B-ISDN
BOM	Beginning of Message
BPCR	Backward Peak Cell Rate
BS	Burst Scale
B-TA	Terminal Adaptor for B-ISDN
Btag	Beginning Tag
B-TE	Terminal Equipment for B-ISDN0
BVPS	Broadband Virtual Path Service (ETS 300 455)
CA	Customer Access
CAC	Connection Admission Control
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CAMC	Customer Access Maintenance Centre
CASE	Core ATM Switching Equipment
CATV	Community Antenna TeleVision
CBDS	Connectionless Broadband Data Service
CBR	Constant Bit Rate
CC	Call Control
	Country Code
	Cross Connect
CCAF	Call Control Access (agent) Function (I.114)
CCF	Connection (call) Control Function (I.114)
CCITT	Comité Consultatif International Telegraphique et Telephonique
CDV	Cell Delay Variation
CDVT	Cell Delay Variation Tolerance
CE	Congestion Experienced
	Connection Element
	Connection Endpoint
CEC	Cell Error Count
CEI	Connection Endpoint Identifier
CEP	Connection End Point
CEQ	Customer Equipment
CER	Cell Error Rate
CES	Circuit Emulation Service
	Connection Endpoint Suffix
CF	Connection Functions
CI	Customer Installation
CIB	CRC Indication Bit
CIF	Common Intermediate Format
CIME	Customer Installation Maintenance Entities
CL	Connectionless
CLAI	CL Access Interface
CLATF	CL Access Termination Functions
CLCP	CL Convergence Protocol
CLHF	CL Handling Functions
CLL	ConnectionLess Layer
CLLR&R	ConnectionLess Layer Routing & Relaying
CLMF	CL Mapping Functions
CLNAP	CL Network Access Protocol
CLNI	CL Network Interface
CLNIP	CL Network Interface Protocol
CLNTF	CL Network Termination Functions
CLP	Cell Loss Priority
CLR	Cell Loss Ratio
CLS	Connectionless Server
CLSF	Connectionless Service Function
CME	Connection Management Entity

CMI	Coded Mark Inversion
CMR	Cell Misinsertion Ratio
C-n	Container - n
CN	Customer Network
CO	Connection Oriented
COH	Connection Overhead
COM	Continuation of Message
CON	Concentrator
CONS	Connection Oriented Network Service
COTS	Connection Oriented Transport Service
CP	Control Plane
CPCS	Common Part Convergence Sublayer
CPCS-PDU	CPCS Protocol Data Unit
CPCS-SDU	CPCS Service Data Unit
CPCS-UU	Common Part Convergence Sublayer User-User
CPE	Customer Premises Equipment
CPI	Common Part Indicator
CPN	Customer Premises Network
CP-AAL	Common Part of AAL type
CRC	Cyclic Redundancy Check
CREn	Cell transfer Reference Event n
CRF	Connection Related Function
CRF(VC)	Virtual Channel Connection Related Function
CRF(VP)	Virtual Path Connection Related Function
CS	Cell Scale
	Convergence Sublayer
CSCW	Computer Supported Cooperative Work
CSDN	Circuit Switched Data Network
CSI	Convergence Sublayer Indication
CS-PDU	Convergence Sublayer Protocol Data Unit
CTD	Cell Transfer Delay
CTF	Control Functions
CTP	Connection Termination Point
CUG	Closed User Group
DA	Destination Address
DAB	Digital Audio Broadcast
DBR	Deterministic Bit Rate
DBS	Direct Broadcast Satellite
DIS	Draft International Standard
DLCI	Data Link Connection Identifier
DNIC	Data Network Identification Code
DNS	Domain Name System (Internet)
DPL	Primary Link for Distribution Services
DQDB	Distributed Queue Dual Bus
DS	Digital Section
DSAP	Destination Service Access Point
DSP	Domain Specific Part
DSS	Distributed Sample Scrambler
DVB	Digital Video Broadcast
EBCN	Explicit Backward Congestion Notification
EBTN	European Backbone Telecommunication Network8
EC	Error Correction
ED	Error Detection
EDC	Error Detection Code
EFCI	Explicit Forward Connection Indication
EFCN	Explicit Forward Congestion Notification
EII	European Information Infrastructure
EM	Element Management
EOM	End of Message
EPD	Early Packet Discards

EPII	European Project Information Infrastructure
ET	Exchange Termination
ETag	End Tag
ETR	ETSI Technical Report
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
EURESCOM	European Institute for Research and Strategic Studies in Europe
F1 ... F5	OAM flows 1 ... 5
FAM	Functional Architecture Model
FCS	Frame Check Sequence
FDDI	Fibre Distributed Data Interface
FEBE	Far End Block Error
FEC	Forward Error Correction
FERF	Far End Receive Failure
FIFO	First In First Out
FITL	Fiber In The Loop
FM	Fault Management
FMBS	Frame Mode Bearer Service
FPCR	Forward Peak Cell Rate
FPLMITS	Future Public Land Mobile Telecommunication Systems (I.114)
FR	Frame Relay
FRM	Fast Resource Management
FRP	Fast Reservation Protocol
FTP	File Transfer Protocol, (Internet)
GA	Group Address
GAHF	Group Address Handling Functions
GAP	Group Addressed PDU
GBSVC	General Broadcast Signalling Virtual Channel
GCRA	Generic Cell Rate monitoring Algorithm
GDMO	Guidelines for the Definition of Managed Objects
GFC	Generic Flow Control
GII	Global Information Infrastructure
GME	Global Management Entity
GVPI	Global Virtual Path Identifier (JAMES project)
HDLC	High Level Data Link Control
HDSL	High bit rate Digital Subscriber Line
HDTV	High Definition Television
HE	Head End
	Header Extension
HEC	Header Error Control
HEL	Header Extension Length
HFC	Hybrid Fiber Coax
HIC	Header Integrity Check
HLF	Higher Layer Functions
HLPI	Higher Layer Protocol Identifier
HOL	Head Of Line
HTML	Hypertext Markup Language, (Internet)
HTTP	Hypertext Transport Protocol, (Internet)
IAHC	International Ad Hoc Committee (Internet)
IBC	Integrated Broadband Communication
IBT	Intrinsic Burst Tolerance
ICI	Inter Carrier Interface
	Interface Control Information
ICIP	Inter-Carrier Interface Protocol
ICS	Implementation Conformance Statement
IDI	Initial Domain Identifier
IDP	Initial Domain Part
	Internet Datagram Protocol
IDU	Interface Data Unit
IEC	International Electrotechnical Commission

IEEE	Institute of Electrical and Electronic Engineers
IETF	Internet Engineering Task Force, (Internet)
ILMI	Interim Local Management Interface, (ATM Forum)
IMAI	Interworking MAN ATM Interface
IMF	Interworking Management Functions
IMPDU	Initial MAC Protocol Data Unit
INI	Inter Network Interface
IP	Internet Protocol
IPL	Primary Link for Interactive Services
IRP	Internal Reference Point
IS	International Standard
ISDN	Integrated Services Digital Network
ISE	Integrated Switching Element (JAMES project)
ISO	International Organization for Standardization
ISUP	ISDN Signalling User Part
IT	Information Type
ITP	International Transit Portion (JAMES project)
ITU	International Telecommunication Union
ITU-T	International Telecommunication Union Telecommunication
ITU-TSS	International Telecommunication Union- Telecommunication Standardization Sector
IWF	Interworking Function
IWU	Interworking Unit
JAMES	Joint ATM Experiment on european Services
JPEG	Joint Picture Experts Group
LAN	Local Area Network
LAPD	Link Access Procedure on the D-channel
LCD	Loss of Cell Delineation
LE	Layer Entity Local Exchange
LEX	Local Exchange
LFC	Local Functions Capabilities
LI	Length Indicator Link Identifier
LIS	Logical IP Subnetwork (RFC 1577)
LLC	Logical Link Control
LLID	Loopback Localization Identifier field, (OAM working group)
LME	Layer Management Entity
LOC	Loss Of Cell delineation Loss Of Continuity check
LOM	Loss Of OAM
LOP	Loss Of Pointer
LOS	Loss Of Signal
LSB	Least Significant Bit
LSI	Large Scale Integration
LT	Line Termination
MA	Medium Adaptor
MAC	Media Access Control Multiplexed Analogue Components. (a TV standard)
MAI	MSS ATM Interface
MAN	Metropolitan Area Network
MBS	Maximum Burst Size (I.371) Monitoring Block Size
MCD	Maintenance Cell Description
ME	Mapping Entity
MIB	Management Information Base
MID	Multiplexing Identification
MIM	Management Information Model
MIME	Multipurpose Internet Mail Extensions, (Internet)
MIN	Multistage Interconnection Networks (JAMES project)

MIR	Maximum Information Rate
MMC	Management Centre
MMF	MSS Management Functions
MoU	Memorandum of Understanding
MP	Measurement Point
MPEG	Moving Pictures Expert Group
MPI	Measurement Point associated with international Interface
MS	Multiplex Section
MSB	Most Significant Bit
MSC	Mobile-services Switching Center (I.114)
MSN	Monitoring cell Sequence Number
MSP	Maintenance Service Provider
	Mini cell Start Pointer
MSS	MAN Switching System
MSVC	Meta Signalling Virtual Channel
MTP	Message Transfer Part
MUX	Multiplexer
NA	Network Aspects
NAN	National Access Network (JAMES project)
NDC	National Destination Code
NE	Network Element
NEF	Network Element Function
NIC	Number of Included Cells
N-ISDN	Narrowband Integrated Services Digital Network
NM	Network Management
NMB	Number of Monitored Blocks
NMC	Network Management Centre
NNI	Network Node Interface
NP	Network Performance
NPC	Network Parameter Control
NRM	Network Resource Management
NSAP	Network Service Access Point
NSN	National Significant number
NT	Network Termination
NTF	Network Termination Functions
NTN	Network Terminal Number
NTSC	National Television System Committee modulation system. (a TV standard)
NVOD	Near Video On Demand
OAM	Operation Administration and Maintenance
	Operation And Maintenance
OAMC	Operation and Maintenance Centre
OAN	Optical Access Network
OFDM	Optical Frequency Division Multiplex
OS	Operating System
OSF	Operating System Functions
OSI	Open Systems Interconnection
OSS	Operation Support System (I.114)
OTDM	Optical Time Division Multiplex
OUI	Organizationally Unique Identifier
PAD	Padding
PAL	Phase Alternating Line modulation system. (a TV standard)
PAS	Publicly Available Specifications
PC	Priority Control
PCF	Protocol Conversion Functions
PCI	Protocol Control Information
PCM	Pulse Code Modulation
PCR	Peak Cell Rate
PCS	Personal Communication Services
PDH	Plesiochronous Digital Hierarchy
PDN	Packet Data Network

PDU	Protocol Data Unit
PEI	Peak Emission Interval
PEN	Pan European Network
PHY	Physical Layer
PI	Protocol Identifier
PICS	Protocol Implementation Conformance Statement
PID	Protocol Identifier
PL	Pad Length
	Physical Layer
PLK	Primary link
PLMN	Public Land Mobile Network (I.114)
PL-OAM	Physical Layer Operation and Maintenance (cell)
PM	Performance Management
	Performance Monitoring
	Physical Medium
PNO	Public Network Operator
POH	Path Overhead
PON	Passive Optical Network
POTS	Plain Old Telephone Service
PPD	Partial Packet Discard
PPP	Point to Point Protocol, (Internet)
PPTU	PDU Per Time Unit
PRM	Protocol Reference Model
PSDN	Packet Switched Data Network
PSN	Physical layer OAM Sequence Number
PSTN	Public Switched Telephone Network
PSVC	Point-to-point Signalling Virtual Channel
PT	Payload Type
PTI	Payload Type Identifier
PTN	Public Telephone Network
PTR	Pointer
PVC	Permanent Virtual Channel
QAM	Quadrature Amplitude Modulation
QCIF	Quarter Common Intermediate Format
QOS	Quality of Service
Q-type	TMN Interface
RACE	Research and development in Advanced Communications technologies in Europe
RAI	Remote Alarm Indication
RC	Resource Control
RDI	Remote Defect Indicator
REM	Rate Envelope Multiplexing
RES	Reserved (field)
RF	Radio Frequency
RFC	Request For Comments (Internet)
RFH	Remote Frame Handler
RG	Regenerator
RLP	Radio Link Protocol
RM	Resource Management (cell)
RPOA	Recognized Private Operating Agency
RS	Regenerator Section
RSC	Reed-Solomon burst error correcting Code
RSE	Reed-Solomon Erasure code
RTS	Residual Time Stamp
RU	Remote Unit
SA	Source Address
SAP	Service Access Point
SAPI	Service Access Point Identifier
SAR	Segmentation and Reassembly (sublayer)
SAR-PDU	SAR Protocol Data Unit
SAR-SDU	SAR Service Data Unit

SBM	Shared Buffer Memory
SBR	Statistical Bit Rate
SBSVC	Selective Broadcast Signalling Virtual Channel
SC	Sequence Count
	Service Component
SCE	Service Control Element
SCEF	Service Creation Environment Function (I.114)
SCF	Service Control Functions
SCR	SustainableCellRate
SDF	Service Data Function (I.114)
SDH	Synchronous Digital Hierarchy
SDL	Specification and Description Language
SDT	Structured Data Transfer
SDU	Service Data Unit
SECAM	Sequential Couleur A Mémoire modulation system. (a TV standard)
SECB	Severely Errored Cell Block
SECBR	Severely Errored Cell Block
SES	Severely Errored Second
SFET	Synchronous Frequency Encoding Technique
SIR	Sustained Information Rate
SLE	Sub-Layer Entity
SLIP	Serial Line Interface Protocol, (Internet)
SLP	Submitted Loss Priority
SM	Service Management
	Service Multiplexers
SMAF	Service Management Access (agent) Function (I.114)
SMDS	Switched Multimegabit Data Service
SMF	Service Management Function (I.114)
SMTP	Simple Mail Transfer Protocol, (Internet)
SN	Sequence Number
	Subscriber Number
SN	Service Node
SNAP	Sub Network Access Protocol
SNI	Service Node Interface
SNMP	Simple Network Management Protocol, (Internet)
SNP	Sequence Number Protection
SNPA	Sub-Network Point of Attachment
SOH	Section Overhead
SONET	Synchronous Optical NETwork
SP	Service Provider
SPL	Service Provider Link
SPN	Subscriber Premises Network
SRF	Specialized Resource Function
SRTS	Synchronous Residual Time Stamp
SS7	Signalling System number 7
SSAP	Source Service Access Point
SSCF	Service Specific Coordination Function
SSCOP	Service Specific Connection Oriented Protocol
SSCS	Service Specific Convergence Sublayer
SSCS-PDU	SSCS Protocol Data Unit
SSF	Service Switching Function (I.114)
SSF	Service Switching Functions
SSM	Single Segment Message
SSN	Switching or Signalling Node
ST	Segment Type
STM	Synchronous Transfer Mode
STM-n	Synchronous Transport Module - n
SVC	Signalling Virtual Channel
SVC	Switched Virtual Channel
SAAL	Signalling AAL



TA	Terminal Adaptor
TAPI	Telephony Application Programming Interface, (Microsoft and Intel)
TAT	Transit Access Termination
TB	B-ISDN T-type interface T reference point in B-ISDN
TC	Transmission Convergence sublayer
TCE	Transit Connection Element
TCP	Transport Control Protocol (Internet)
TCP/IP	Transmission Control Protocol/Internet Protocol, (Internet)
TCRF	Transit Connection Related Function
TE	Terminal Equipment
TEI	Terminal Endpoint Identifier Telecommunications
TEX	Transit Exchange
TMN	Telecommunication Management Network
TP	Termination Point
TPE	Transmission Path Endpoint
TS	Time Slot Time Stamp Traffic Shaping
TTP	Trail Termination Point
TUC	Total User Cell number
UMI	User MAN Interface
UNI	User Network Interface
UP	User Plane
UPC	Usage Parameter Control
UPT	Universal Personal Telecommunication
UPTN	Universal Personal Telecommunication Number
VBD	Voice Band Data
VBR	Variable Bit Rate
VC	Virtual Channel
VC-AIS	Alarm Indication Signal for VC
VCC	Virtual Channel Connection
VCCE	Virtual Channel Connection Endpoint
VC-FERF	Far End Receive Failure for VC
VCI	Virtual Channel Identifier
VCL	Virtual Channel Link
VC-n	Virtual Container - n
VCS	Video Conference Service
VDSL	Very high speed Digital Subscriber Line
VHDSL	Very High bit rate Digital Subscriber Line
VLSI	Very Large Scale Integration
VOD	Video on Demand
VP	Virtual Path
VP-AIS	Alarm Indication Signal for VP
VPC	Virtual Path Connection
VPCE	Virtual Path Connection Endpoint
VP-FERF	Far End Receive Failure for VP
VPI	Virtual Path Identifier
VPL	Virtual Path Link
VPLC	VP Link Connection
VPN	Virtual Private Network
VPNC	VP Network Connection
VPSC	VP Sub network Connection
VPXC	VP Cross Connect
WAN	Wide Area Network
WCT	Worst Case Traffic
WTSC	World Telecommunication Standardization Conference
WWW	World Wide Web, (Internet)
X-type	TMN interface

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## History

<b>Document history</b>		
V1.1.1	July 1998	Publication