INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

J.1

Amendment 1
(11/98)

SERIES J: TRANSMISSION OF TELEVISION, SOUND PROGRAMME AND OTHER MULTIMEDIA SIGNALS

General Recommendations

Terminology for new services in television and sound-programme transmission

Amendment 1

ITU-T Recommendation J.1 – Amendment 1

(Previously CCITT Recommendation)

ITU-T J-SERIES RECOMMENDATIONS

TRANSMISSION OF TELEVISION, SOUND PROGRAMME AND OTHER MULTIMEDIA SIGNALS

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ITU-T RECOMMENDATION J.1

TERMINOLOGY FOR NEW SERVICES IN TELEVISION AND SOUND-PROGRAMME TRANSMISSION

AMENDMENT 1

Source

Amendment 1 to ITU-T Recommendation J.1 was prepared by ITU-T Study Group 9 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 19th of November 1998.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation the term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration*, *ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992)*.

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As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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TERMINOLOGY FOR NEW SERVICES IN TELEVISION AND SOUND-PROGRAMME TRANSMISSION

AMENDMENT 1

(Geneva, 1998)

1) Modifications to Recommendation J.1

1.1 *The following definitions should be used to replace the corresponding definitions currently given in Recommendation J.1:*

2.32 **fibre node**: A point of interface between a fibre trunk and the coaxial distribution.

2.34 **Hybrid Fibre/Coaxial (HFC) system**: A broadband bidirectional shared-media transmission system using fibre trunks between the headend and the fibre nodes, and coaxial distribution from the fibre nodes to the customer locations.

1.2 "Transparent Digital Transmodulator (TDT)", definition 2.99

- *Delete the acronym "(TDT)" from the definition.*
- *Delete also the acronym "TDT" from the list of acronyms.*

2) New terms and definitions for addition to Recommendation J.1

Term	Definition	Source Recommendation
Address Resolution Protocol (ARP)	A protocol of the IETF for converting network addresses to 48-bit Ethernet addresses.	J.112
Asynchronous Transfer Mode (ATM)	A protocol for the transmission of a variety of digital signals using uniform 53-byte cells.	J.112
bouquet	A collection of services marketed as a single entity.	J.94
Bridge protocol Data Unit (BDU)	A unit spanning tree protocol messages as defined in ISO/IEC 10038.	J.112
broadcast address	A predefined destination address that denotes the set of all data network service access points.	J.112
broadcaster (service provider)	An organisation which assembles a sequence of events or programmes to be delivered to the viewer based upon a schedule.	J.94
Cable Modem (called CM, or IIM, or MH)	A modulator-demodulator at subscriber locations intended for use in conveying data communications on a cable television system.	J.112
Cable Modem Termination System (called CMTS, or INA, or MC)	Cable modem termination system, located at the cable television system headend or distribution hub, which provides complementary functionality to the cable modems to enable data connectivity to a wide-area network.	J.112

Term	Definition	Source Recommendation
Cable Modem Termination System – Network Side Interface (called NSI, or INA, or MC)	The interface between a CMTS and the equipment on its network side.	J.112
Cable Modem to CPE Interface (CMCI)	The interface between a CM and CPE.	J.112
carrier hum modulation	The peak-to-peak magnitude of the amplitude distortion relative to the RF carrier signal level due to the fundamental and low-order harmonics of the power-supply frequency.	J.112
carrier related band	A frequency bandwidth spacing of television channels on a cable television system in exact frequency increments.	J.112
Carrier-to-Noise Ratio (C/N or CNR)	The square of the ratio of the root mean square (rms) of the voltage of the digitally-modulated RF carrier to the rms of the continuous random noise voltage in the defined measurement bandwidth (if not specified explicitly, the measurement bandwidth is the symbol rate of the digital modulation).	J.112
Composite Second Order beat (CSO)	The peak of the average level of distortion products due to second-order non-linearities in cable system equipment.	J.112
Composite Triple Beat (CTB)	The peak of the average level of distortion components due to third-order non-linearities in cable system equipment.	J.112
cross-modulation	A form of television signal distortion where modulation from one or more television channels is imposed on another channel or channels.	J.112
Customer Premises Equipment (CPE)	Equipment at the end user's premises; it may be provided by the end user or by the service provider.	J.112
data link layer	Layer 2 [in the Open Systems Interconnection (OSI) architecture]; the layer that provides services to transfer data over the transmission link between open systems.	J.112
delivery system	The physical medium by which one or more signal multiplexes are transmitted, e.g. satellite transponder, wide-band coaxial cable, fibre optics.	J.94
distribution hub	A location in a cable television network which performs the functions of a Headend for customers in its immediate area, and which receives some or all of its television program material from a Master Headend in the same metropolitan or regional area.	J.112
downstream	In cable television, the direction of transmission from the headend to the subscriber.	J.112
drop cable	Coaxial cable that connects to a residence or service location from a directional coupler (tap) placed on the nearest coaxial feeder cable.	J.112
Dynamic Host Configuration Protocol (DHCP)	An Internet protocol used for assigning network-layer (IP) addresses.	J.112
dynamic range	The ratio between the greatest signal power that can be transmitted over a multi-channel analogue transmission system without exceeding distortion or other performance limits, and the least signal power that can be utilised without exceeding noise, error rate or other performance limits.	J.112

Term	Definition	Source Recommendation
Entitlement Management Messages (EMM)	Private Conditional Access information which specifies the authorisation levels or the services of specific decoders; they may be addressed to individual decoder or groups of decoders.	J.94
epoch	A period of time. A "program epoch" is the period of time during which a particular programme is aired.	
errored Second	Any one second interval containing at least one bit error.	J.112
event	A grouping of elementary broadcast data streams with a defined start and end time belonging to a common service, e.g. first half of a football match, News Flash, first part of an entertainment show.	J.94
extended subsplit	A frequency division scheme that allows bidirectional traffic on a single coaxial cable; in North America, reverse path signals come to the Headend from 5 to 42 MHz, and forward path signals go from the Headend from 50 or 54 MHz to the upper frequency limit.	J.112
feeder cable	Coaxial cables that run along streets within the served area and connect between the individual taps which serve the customer drops.	J.112
fixed stuff	Bytes that are used to fill up unused data positions.	J.132
forward channel	The direction of RF signal flow away from the headend toward the end user; equivalent to Downstream.	J.112
group delay	The difference in transmission time between the highest and lowest of several frequencies through a device, circuit or system.	J.112
guard time	Minimum time allocated between bursts in the upstream, referenced from the symbol centre of the last symbol of a burst to the symbol centre of the first symbol of the following burst.	J.112
Harmonic Related Carrier (HRC)	A method of spacing television channels on a cable television system in exact increments, with all carrier frequencies harmonically related to a common reference.	J.112
headend	The central location on the cable network that is responsible for injecting broadcast video and other signals in the downstream direction; see also Master Headend, Distribution Hub.	J.112
header	Protocol control information located at the beginning of a protocol data unit.	J.112
high return	A frequency division scheme that allows bidirectional traffic on a single coaxial cable; reverse channel signals propagate to the headend above the downstream passband.	J.112
hum modulation	Undesired modulation of the television visual carrier by the fundamental or low-order harmonics of the power supply frequency, or other low-frequency disturbances.	J.112
impulse noise	Noise characterised by non-overlapping transient disturbances.	
Incremental Related Carriers (IRC)	A method of spacing NTSC television channels on a cable television system in which all channels except 5 and 6 correspond to the standard channel plan, used to reduce composite triple beat distortions.	J.112
interleave	An error correction method that enables the correction of errors induced by burst noise.	J.112
Internet Control Message Protocol (ICMP)	An Internet network-layer protocol.	J.112

Term	Definition	Source Recommendation
Internet Protocol (IP)	An Internet network-layer protocol, defined by the IETF.	J.112
latency	The time, expressed in quantity of symbols, taken for a signal element to pass through a device.	J.112
Local Area Network (LAN)	A data network in which serial transmission is used for direct data communication among data stations located on the user's premises.	J.112
Logical Link Control (LLC) procedure	In a Local Area Network (LAN) or a Metropolitan Area Network (MAN), that part of the protocol that governs the assembling of data link layer frames and their exchange between data stations, independent of how the transmission medium is shared.	J.112
master headend	A headend which collects television program material from various sources by satellite, microwave, fibre and other means, and distributes this material to Distribution Hubs in the same metropolitan or regional area; a Master Headend may also perform the functions of a Distribution Hub for customers in its own immediate area.	J.112
Mean Time to Repair (MTTR)	In cable television systems, the MTTR is the average elapsed time from the moment a loss of RF channel operation is detected up to the moment the RF channel operation is fully restored.	J.112
Media Access Control (MAC) address	The "built-in" hardware address of a device connected to a shared medium.	J.112
Media Access Control (MAC) procedure	In a subnetwork, that part of the protocol that governs access to the transmission medium independent of the physical characteristics of the medium, but taking into account the topological aspects of the subnetworks, in order to enable the exchange of data between nodes; MAC procedures include framing, error protection, and acquiring the right to use the underlying transmission medium.	J.112
Media Access Control (MAC) sublayer	The part of the data link layer that supports topology dependent functions and uses the services of the Physical Layer to provide services to the Logical Link Control (LLC) sublayer.	J.112
Micro-reflections	Echoes in the forward transmission path due to departures from ideal amplitude and phase characteristics of the path.	J.112
mid split	A frequency division scheme that allows bidirectional traffic on a single coaxial cable; e.g. in North America, reverse channel signals propagate to the headend from 5 to 108 MHz, the forward path signals go from the Headend from 162 MHz to the upper frequency limit, and the diplex crossover band is located from 108 to 162 MHz.	J.112
MPEG-2 Standard	The ISO/IEC Standard 13818; systems coding is defined in Part 1; video coding is defined in Part 2; audio coding is defined in Part 3.	
MPEG-2 Transport Stream (TS) packet	A data packet possessing a length of 188 bytes including 4 bytes of header information. The header contains MPEG related data.	J.132
Multimedia Centre Equipment (called MC, or INA, or CMTS)	Equipment located at cable television headend, which provides complementary functionality to the Multimedia Home Equipment to enable data connectivity to a wide-area network.	J.112
Multimedia Cable Network System (MCNS) partners	A consortium of several cable television operators interested in deploying high-speed data communications systems on cable television systems.	J.112

Term	Definition	Source Recommendation
Multimedia Home Equipment (called MH, or INA, or CMTS)	A modulator-demodulator at subscriber locations intended for use in conveying data communications on a cable television system.	
multiplex	A stream of all the digital data carrying one or more services within a single physical channel.	J.94
multipoint access	User access in which more than one terminal equipment is supported by a single network termination.	J.112
multipoint connection	A connection among more than two data network terminations.	J.112
network layer	Layer 3 [in the Open Systems Interconnection (OSI) architecture]; the layer that provides services to establish a path between open systems.	J.112
network management	The functions related to the management of data link layer and physical layer resources and their stations across the data network supported by the hybrid fibre/coax system.	J.112
Open Systems Interconnection (OSI)	A framework of ISO Standards for communication between different systems made by different vendors, in which the communications process is organised into seven different categories that are placed in a layered sequence based on their relationship to the user; each layer uses the layer immediately below it and provides a service to the layer above. Layers 7 through 4 deal with end-to-end communication between the message source and destination, and layers 3 through 1 deal with network functions.	J.112
Organisationally Unique Identifier (OUI)	A three-octet IEEE assigned identifier that can be used to generate Universal LAN MAC addresses and Protocol Identifiers per ANSI/IEEE Standard 802 for use in Local and Metropolitan Area Network applications.	J.112
Packet Identifier (PID)	A unique integer value used to identify elementary streams of a programme in a single- or multi-programme MPEG-2 stream.	J.112
Physical (PHY) layer	Layer 1 [in the Open Systems Interconnection (OSI) architecture]; the layer that provides services to transmit bits or groups of bits over a transmission link between open systems, and which entails electrical, mechanical and handshaking procedures.	J.112
Physical Media Dependent (PMD) sublayer	A sublayer of the Physical Layer which is concerned with transmitting bits or groups of bits over particular types of transmission link between open systems, and which entails electrical, mechanical and handshaking procedures.	J.112
PLUGE	Test signal consisting of a peak white level patch and several dark level patches/stripes used for the setting of brightness and contrast of the display; for details, see ITU-R Recommendation BT 814.	J.140
Programme Specific Information (PSI)	In MPEG-2, normative data necessary for the demultiplexing of Transport Streams and the successful regeneration of programmes.	J.112
programme stream	In MPEG-2, a multiplex of variable-length digital video and audio packets from one or more programme sources having a common time-base.	J.112
protocol	A set of rules and formats that determines the communication behaviour of layer entities in the performance of the layer functions.	J.112
Quadrature Amplitude Modulation (QAM)	A method of modulating digital signals onto a radio frequency carrier signal involving both amplitude and phase coding.	J.112

Term	Definition	Source Recommendation
Quaternary Phase Shift Keying (QPSK)	A method of modulating digital signals onto a radio frequency carrier signal using four phase states to code two digital bits.	J.112
Radio Frequency (RF)	In cable television systems, this refers to electromagnetic signals typically in the range 5 to 1000 MHz.	J.112
reed solomon code	A forward error correction code located before interleaving that enables correction of errors induced by burst noise.	J.112
Request For Comments (RFC)	A technical policy document of the IETF.	J.112
return loss	The parameter describing the attenuation of a guided wave signal (e.g. via a coaxial cable) returned to a source by a device or medium resulting from reflections of the signal generated by the source.	J.112
reverse channel	The direction of signal flow towards the headend, away from the subscriber; equivalent to Upstream.	J.112
roll off	A coefficient of the cosine roll off function that determines the frequency characteristics of the filter.	J.112
Routing Information Protocol (RIP)	A protocol of the IETF for exchanging routing information about IP networks and subnets.	J.112
Service Access Point (SAP)	The point at which services are provided by one layer, or sublayer, to the layer immediately above it.	J.112
Service Data Unit (SDU)	Information that is delivered as a unit between peer service access points.	J.112
Service Information (SI)	Digital data describing the delivery system, content and scheduling/timing of broadcast data streams etc., it includes MPEG-2 PSI together with independently defined extensions.	J.94
Simple Network Management Protocol (SNMP)	A network management protocol of the IETF.	J.112
Spectrum Management System (SMS)	A system for managing the RF cable spectrum.	J.112
sublayer	A subdivision of a layer in the Open Systems Interconnection (OSI) reference model.	J.112
subnetwork	A subnetwork is physically formed by connecting adjacent nodes with transmission links.	J.112
Subnetwork Access Protocol (SNAP)	An extension of the LLC header to accommodate the use of IEEE 802 type networks as IP networks.	J.112

Term	Definition	Source Recommendation
subsplit	A frequency-division scheme that allows bi-directional traffic on a single cable; in North America, reverse path signals come to the Headend from 5 to 30 (up to 42 on Extended Subsplit systems) MHz, and forward path signals go from the headend from 50 or 54 MHz to the upper frequency limit of the cable network.	J.112
subsystem	An element in a hierarchical division of an open system that interacts directly with elements in the next higher division or the next lower division of that open system.	J.112
systems management	Functions in the application layer related to the management of various Open Systems Interconnection (OSI) resources and their status across all layers of the OSI architecture.	J.112
tick	Time intervals that are the reference for upstream mini-slot definition and upstream transmission times.	J.112
tilt	Maximum difference in transmission gain of a cable television system over a given bandwidth (typically over the entire forward operating frequency range).	J.112
transit delay	The time difference between the instant at which the first bit of a PDU crosses one designated boundary, and the instant at which the last bit of the same PDU crosses a second designated boundary.	J.112
Transmission Control Protocol (TCP)	A transport-layer Internet protocol which ensures successful end-to-end delivery of data packets without error, as defined by the IETF.	J.112
transmission convergence sublayer	A sublayer of the Physical Layer that provides an interface between the Data Link Layer and the PMD Sublayer.	J.112
transmission link	The physical unit of a subnetwork that provides the transmission connection between adjacent nodes.	J.112
transmission medium	The material on which information signals may be carried; e.g. optical fibre, coaxial cable, and twisted wire pairs.	J.112
transmission system	The interface and transmission medium through which peer physical layer entities transfer bits.	J.112
transmit on/off ratio	In multiple-access systems, the ratio between the signal powers sent to line when transmitting and when not transmitting.	J.112
transport stream	In MPEG-2, a packet-based method of multiplexing one or more digital video and audio streams having one or more independent time bases into a single stream.	J.112
Trivial File Transfer Protocol (TFTP)	An Internet protocol for transferring files without the requirement for user names and passwords that is typically used for automatic downloads of data and software.	J.112
trunk cable	Cables that carry the signal from the headend to groups of subscribers; the cables can be either coaxial or fibre depending on the design of the system.	J.112
Type/Length/Value (TLV)	An encoding of three fields, in which the first field indicates the type of element, the second the length of the element, and the third field the value.	J.112
upstream	The direction from the subscriber location toward the headend.	J.112

3) Acronyms for addition to Recommendation J.1

Acronym	Definition	Source Recommendation
AIS	Alarm Indication Signal	J.132
ANSI	American National Standards Institute	J.112
ARP	Address Resolution Protocol	J.111
ASI	Asynchronous Serial Interface	J.132
AU	Administrative Unit	J.132
AUG	Administrative Unit Group	J.132
BAT	Bouquet Association Table	J.94
BC	Broadcast Channel	J.112
BCD	Binary Coded Decimal	J.94
BPDU	Bridge Protocol Data Unit	J.112
BRA	Basic Rate Access	J.112
C-n	Container-n	J.132
CAT	Conditional Access Table	J.94
CATV	Cable Television (Historically – Community Antenna TeleVision System)	J.150
CDT	Carrier Definition Table	J.94
CM	Cable Modem, see also IIM, MH	J.112
CMCI	Cable Modem to CPE Interface	J.112
CMTS	Cable Modem Termination System	J.112
CMTS-NSI	Cable Modem Termination System – Network Side Interface	J.112
CNR	Carrier-to-Noise Ratio	J.112
CPE	Customer Premises Equipment	J.112
CSO	Composite Second Order Beat	J.112
CTB	Composite Triple Beat	J.112
DA	Destination Address	J.112
DCE	Data Communication Equipment	J.112
DEG	DEGraded	J.132
DHCP	Dynamic Host Configuration Protocol	J.112
DOC	Data over Cable	J.112
DTE	Data Terminal Equipment	J.112
DTMF	Dual Tone Multifrequency (dialling mode)	J.112
EBC	Error Block Count	J.132
EH	Extended Header	J.112
EHDR	Extended Header	J.112
EIT	Event Information Table	J.94
EMF	Equipment Management Function	J.132
ES	Errored Second	J.132

Acronym	Definition	Source Recommendation
FAS	Frame Alignment Signal	J.132
FDDI	Fibre Distributed Data Interface	J.112
FDMA	Frequency Division Multiple Access	J.112
FTTC	Fibre to the Curb	
FTTH	Fibre to the Home	
GA	Grand Alliance	J.94
GFC	Generic Flow Control	J.132
GMT	Greenwich Mean Time	J.94
GPS	Global Positioning System	J.94
GSTN	General Switched Telephone Network	J.112
GT	Global Time	J.112
HCS	Header Check Sequence	J.112
HEC	Header Error Control	J.132
HOVC	Higher Order Virtual Container	J.132
I	In-phase components of the modulated signal	J.150
IB	In-Band	J.112
IC	Interaction Channel	J.112
ICMP	Internet Control Message Protocol	J.112
IE	Information Element	J.112
IEEE	Institute of Electrical and Electronic Engineers	J.112
IETF	Internet Engineering Task Force	J.112
IIM	Interactive Interface Module	J.112
INA	Interactive Network Adapter	J.112
IP	Internet Protocol	J.112
IPPV	Impulse Pay-Per-View	
JTC	Joint Technical Committee	
LCD	Loss of Cell Delineation	J.132
LEN	Length (in bytes unless otherwise stated)	J.112
LLC	Logical Link Control (LLC) procedure	J.112
LMC	Lost and Misinserted Cells	J.132
LMDS	Local multipoint distribution system	J.150
LOF	Loss of Frame	J.132
LOM	Loss of Multiframe	J.132
LOP	Loss of Pointer	J.132
LOS	Loss of Signal	J.132
LOVC	Lower Order Virtual Container	J.132
LT	Local Time	J.112
LTI	Loss of Timing Inputs	J.132
MAA	MPEG ATM Adaptation	J.132
MAC	Media Access Control	J.112

Acronym	Definition	Source Recommendation
Mbit/s	Megabits per second	
MC	Multimedia Centre Equipment	J.112
MCNS	Multimedia Cable Network System (MCNS) partners	J.112
MCPT	Multiple Carriers per Transponder	J.94
MH	Multimedia Home Equipment	
MJD	Modified Julian Date	J.94
MMT	Modulation Mode Table	J.94
MON	Monitoring	J.131
MP	Management Point	J.132
MPEG-2	The ISO/IEC Standard 13818, see also MPEG	
MPEG-2 TS	MPEG-2 Transport Stream	J.131
MPI	MPEG Physical Interface	J.132
MSA	Multiplex Section Adaptation	J.132
MSAP	MAC Service Access Point	J.112
MSOH	Multiplex Section Overhead	J.132
MST	Multiplex Section Termination	
MUX	Multiplex	J.150
MVDS	Multichannel Video Distribution System (deprecated; use LMDS)	
NE	Network Element	J.132
NIT	Network Information Table	J.94
NIU	Network Interface Unit	J.112
NSAP	Network Service Access Point	J.112
OOB	Out-of-Band	J.112
OSI	Open Systems Interconnection	J.112
OUI	Organisationally Unique Identifier	J.112
PAT	Program Association Table	J.94
PDH	Plesiochronous Digital Hierarchy	J.131
PES	Packetized Elementary Stream	J.94
PHY	Physical (PHY) Layer	J.112
PID	Packet Identifier	J.112
PL	Path Layer	J.131
PLM	Payload Label Mismatch	J.132
PM	Pulse Modulation	J.112
PMD	Physical Media Dependent (PMD) sublayer	J.112
PMT	Program Map Table	J.94
POH	Path Overhead	J.132
PPI	PDH Physical Interface	J.131
PPT	PDH Path Termination	J.131
PS	Programme Segment	J.140

Acronym	Definition	Source Recommendation
PSI	Program Specific Information	J.94
PSL	Physical Section Layer	J.131
PSTN	Public Switched Telephone Network	J.111
PT	Payload Type	J.132
PTS	Presentation Time Stamp	J.94
PVD	Preferred Viewing Distance	J.140
Q	Quadrature phase components of the modulated signal	J.150
QP	Quality Parameter	J.140
RDI	Remote Defect Indication	J.132
REI	Remote Error Indication	J.132
REQ	Request indicator used in Annex B	J.112
RFC	Request for Comments	J.112
RNG	Ranging	J.112
RR	Radio Relay	J.132
RSOH	Regenerator Section Overhead	J.132
RST	Regenerator Section Termination	J.132
RTD	Round Trip Delay	J.112
RTT	Rating Text Table	J.94
SDT	Service Description Table	J.94
SDTV	Standard Definition Television	J.140
SECAM	*Séquentiel couleur à mémoire* (Sequential colour with memory)	J.94
SES	Severely Errored Second	J.132
SETPI	Synchronous Equipment Timing Physical Interface	J.132
SETS	Synchronous Equipment Timing Source	J.132
SID	Service Identifier	J.112
SIT	Satellite Information Table	J.94
SMS	Spectrum Management System	J.112
SN	Sequence Number	J.132
SNAP	Subnetwork Access Protocol	J.112
SNI	Sequence Number Invalid	J.132
SNMP	Simple Network Management Protocol	J.112
SOH	Section Overhead	J.132
SPI	Synchronous Parallel (or Physical) Interface	J.132
SSCQE	Single Stimulus Continuous Quality Evaluation	J.140
SSF	Server Signal Fail	J.132
SSI	Synchronous Serial Interface	J.132
ST	Stuffing Table	J.94

Acronym	Definition	Source Recommendation
STB	Set Top Box	J.111
STM	Synchronous Transport Module	J.132
STU	Set Top Unit	J.111
SYNC	Synchronisation	J.112
TAI	International Atomic Time	J.94
TC	Transmission Convergence sublayer	J.112
TD	Transmit Degrade	J.132
TDMA	Time Division Multiplex Access	J.112
TF	Transmit Fail	J.132
TFTP	Trivial File Transfer Protocol	J.112
TIM	Trace Identifier Mismatch	J.132
TLV	Type/Length/Value	J.112
TNT	Transponder Name Table	J.94
TOT	Time Offset Table	J.94
TP	Test Presentation	J.140
TS	Transport Stream	J.112
TSLE	Transport Stream synchronisation Loss Error	J.132
TU	Tributary Unit	J.132
UCC	Upstream Channel Change	J.112
UCD	Upstream Channel Descriptor	J.112
UI	Unit Interval	J.132
UNEQ	UNEQuipped	J.132
UTC	Universal Time Coordinated	J.94
VC	Virtual Container or Virtual Channel	J.132
VCI	Virtual Channel Identifier	J.132
VCN	Virtual Channel Number	J.94
VCT	Virtual Channel Table	J.94
VP	Virtual Path	J.132
VPE	Virtual Path Entity	J.132
VPI	Virtual Path Identifier	J.132
VPME	Virtual Path Multiplexing Entity	J.132
WTR	Wait to Restore	J.132

ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
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Series J	**Transmission of television, sound programme and other multimedia signals**
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure
Series Z	Languages and general software aspects for telecommunication systems