Series A: Organization of the work of ITU-T

Number	Approval Date	Recommendation Title	Status
		Organization of the work of ITU-T	
A.1	10-2004	Work methods for study groups of the ITU Telecommunication Standardization Sector (ITU-T)	
A.2	10-2004	Presentation of contributions relative to the study of Questions assigned to ITU-T	
A.4	06-2002	Communication process between ITU-T and Forums and Consortia	
A.5	11-2001	Generic procedures for including references to documents of other organizations in ITU-T Recommendations	
A.6	06-2002	Cooperation and exchange of information between ITU-T and national and regional standards development organizations	
A.7	10-2004	Focus groups: Working methods and procedures	
A.8	10-2004	Alternative approval process for new and revised Recommendations	
A.9	11-2003	Working procedures for the Special Study Group on IMT-2000 and Beyond	
A.11	10-2004	Publication of ITU-T Recommendations and WTSA proceedings	
A.12	10-2004	Identification and layout of ITU-T Recommendations	
A.13	10-2000	Supplements to ITU-T Recommendations	
A.23	10-1996	Collaboration with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) on information technology	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
A.23 Annex A	11-2001	Guide to ITU-T and ISO/IEC JTC1 cooperation	
A.Sup2	06-2000	Guidelines on interoperability experiments	
A.Sup3	11-2001	IETF and ITU-T collaboration guidelines	
Recommendat	ion count: 15		

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Series D: General tariff principles

Number	Approval Date	Recommendation Title	Status
		General tariff principles	
D.000	06-2002	Terms and definitions for the D-series Recommendations	
D.1	07-1991	General principles for the lease of international (continental and intercontinental) private telecommunication circuits and networks	
0.3	06-1992	Principles for the lease of analogue international circuits for private service	
D.4	12-1998	Special conditions for the lease of international (continental and intercontinental) sound- and television-programme circuits for private service	
0.4 (1998) Amendment 1	06-2004		
0.5	11-1988	Costs and value of services rendered as factors in the fixing of rates	
0.7	01-1992	Concept and implementation of "one-stop shopping" for international private leased telecommunication circuits	
8.0	11-1988	Special conditions for the lease of international end-to-end digital circuits for private service	
0.9	11-1988	Private leasing of transmitters or receivers	
0.10	07-1991	General tariff principles for international public data communication services	
D.11	03-1991	Special tariff principles for international packet-switched public data communication services by means of the virtual call facility	
0.12	11-1988	Measurement unit for charging by volume in the international packet- switched data communication service	
0.13	11-1988	Guiding principles to govern the apportionment of accounting rates in international packet-switched public data communication relations	
0.15	11-1988	General charging and accounting principles for non-voice services provided by interworking between public data networks	
0.20	11-1988	Special tariff principles for the international circuit-switched public data communication services	
D.21	11-1988	Special tariff principles for short transaction transmissions on the international packet-switched public data networks using the fast select facility with restriction	
0.30	11-1988	Implementation of reverse charging on international public data communication services	
0.35	01-1992	General charging principles in the international public message handling services and associated applications	
0.36	03-1995	General accounting principles applicable to message handling services and associated applications	
0.37	07-1996	Accounting and settlement principles applicable to the provision of public directory services between interconnected Directory Management Domains	

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D.40	06-1992	General tariff principles applicable to telegrams exchanged in the international public telegram service
D.41	11-1988	Introduction of accounting rates by zones in the international public telegram service
D.42	11-1988	Accounting in the international public telegram service
D.43	11-1988	Partial and total refund of charges in the international public telegram service
D.45	06-1992	Charging and accounting principles for the international telemessage service
D.50	10-2000	International Internet connection
D.50 (2000) Amendment 1	06-2004	New Appendix I – General considerations for charging criteria and options for international Internet connectivity
D.60	07-1991	Guiding principles to govern the apportionment of accounting rates in intercontinental telex relations
D.61	11-1988	Charging and accounting provisions relating to the measurement of the chargeable duration of a telex call
D.65	11-1988	General charging and accounting principles in the international telex service for multi-address messages via store-and-forward units
D.67	03-1995	Charging and accounting in the international telex service
D.70	06-1992	General tariff principles for the international public facsimile service between public bureaux (bureaufax service)
D.71	06-1992	General tariff principles for the public facsimile service between subscriber stations (telefax service)
D.73	06-1992	General tariff and international accounting principles for interworking between the international bureaufax and telefax services
D.79	07-1991	Charging and accounting principles for the international videotex service
D.80	11-1988	Accounting and refunds for phototelegrams
D.81	11-1988	Accounting and refunds for private phototelegraph calls
D.83	11-1988	Rates for phototelegrams and private phototelegraph calls
D.85	11-1988	Charging for international phototelegraph calls to multiple destinations
D.90	03-1995	Charging, billing, international accounting and settlement in the maritime mobile service
D.91	07-1996	Transmission in encoded form of maritime telecommunications accounting information
D.91 (1996) Amendment 1	06-1998	Year 2000 issue and its impact on ITU-T D.91 application
D.93	11-2003	Charging and accounting in the international land mobile telephone service (provided via cellular radio systems)
D.94	01-1992	Charging, billing and accounting principles for international aeronautical mobile service, and international aeronautical mobile-satellite service
D.95	10-1992	Charging, billing, accounting and refunds in the data messaging land/maritime mobile-satellite service

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D.96	12-1999	Charging, billing, accounting and settlement principles for Global Mobile Personal Communications by Satellite (GMPCS) for the international telephone service
D.100	11-1988	Charging for international calls in manual or semi-automatic operating
D.103	06-1992	Charging in automatic service for calls terminating on a recorded announcement stating the reason for the call not being completed
D.104	11-1988	Charging for calls to subscriber's station connected either to the absent subscriber's service or to a device substituting a subscriber in his absence
D.105	11-1988	Charging for calls from or to a public call office
D.106	11-1988	Introduction of reduced rates during periods of light traffic in the international telephone service
D.110	06-1992	Charging and accounting for conference calls
D.115	06-2004	Tariff principles and accounting for the International Freephone Service (IFS)
D.116	06-2004	Charging and accounting principles relating to the home country direct telephone service
D.117	06-1999	Charging and accounting principles for the international premium rate service (IPRS)
D.120	07-1996	Charging and accounting principles for the international telecommunication charge card service
D.140	06-2002	Accounting rate principles for the international telephone service
D.140 (2002) Amendment 1	12-2002	New Appendix to Annex C: Guidelines
D.140 (2002) Amendment 2	06-2003	Revision to Annex E
D.140 (2002) Amendment 3	11-2003	Revised Annex A – Guidelines for the cost elements to be taken into account when determining accounting rates and accounting rate shares for the international telephone service
D.140 Supplement 1	06-2002	Updated teledensities and indicative target settlement rates
D.140 Supplement 2	06-2003	Updated teledensities and indicative target settlement rates (1 January 2003)
D.140 Supplement 3	06-2004	Updated teledensities and indicative target settlement rates (1 January 2004)
D.150	06-1999	New system for accounting in international telephony
D.151	11-1988	Old system for accounting in international telephony
D.155	07-1996	Guiding principles governing the apportionment of accounting rates in intercontinental telephone relations
D.160	11-1988	Mode of application of the flat-rate price procedure set forth in Recommendation D.67 and Recommendation D.150 for remuneration of facilities made available to the Administrations of other countries
D.170	06-1998	Monthly telephone and telex accounts
D.171	11-1988	Adjustments and refunds in the international telephone service

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D.172	11-1988	Accounting for calls circulated over international routes for which accounting rates have not been established
D.173	11-1988	Defaulting subscribers
D.174	11-1988	Conventional transmission of information necessary for billing and accounting regarding collect and credit card calls
D.176	12-1997	Transmission in encoded form of telephone reversed charge billing and accounting information
D.176 (1997) Amendment 1	06-1998	Year 2000 issue and its impact on ITU-T D.176 application
D.177	11-1988	Adjustment of charges and refunds in the international telex service
D.178	03-1993	Monthly accounts for semi-automatic telephone calls (ordinary and urgent calls, with or without special facilities)
D.180	06-2002	Occasional provision of circuits for international sound- and television-programme transmissions
D.180 Amendment 1	06-2004	
D.185	11-1988	General tariff and accounting principles for international one-way point-to- multipoint satellite services
D.186	10-1996	General tariff and accounting principles for international two-way multipoint telecommunication service via satellite
D.188	10-1992	General charging and accounting principles applicable to an international videoconferencing service
D.190	06-2002	Exchange of international traffic accounting data between Administrations using electronic data interchange (EDI) techniques
D.192	06-1992	Principles for charging and accounting of service telecommunications
D.193	11-1988	Special tariff principles for privilege telecommunications
D.195	11-2003	Time-scale for settlement of accounts for international telecommunication services
D.196	06-1992	Clearing of international telecommunication balances of accounts
D.197	07-1991	Notification of change of address(es) for accounting and settlement purposes
D.201	12-2002	General principles regarding call-back practices
D.210	09-1994	General charging and accounting principles for international telecommunication services provided over the Integrated Services Digital Network (ISDN)
D.211	12-1998	International accounting for the use of the signal transfer point and/or signalling point for relay in Signalling System No. 7
D.212	10-1996	Charging and accounting principles for the use of Signalling System No. 7
D.220	03-1991	Charging and accounting principles to be applied to international circuit- mode demand bearer services provided over the integrated services digital network (ISDN)
D.224	12-1999	Charging and accounting principles for ATM/B-ISDN

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D.225	12-1997	Charging and accounting principles to be applied to frame relay data transmission service
D.230	03-1995	General charging and accounting principles for supplementary services associated with international telecommunication services provided over the Integrated Services Digital Network (ISDN)
D.231	11-1988	Charging and accounting principles relating to the User-to-User Information (UUI) supplementary service
D.232	05-1997	Specific tariff and accounting principles applicable to ISDN supplementary services
D.233	07-1996	Charging and accounting principles to be applied to the reversed charge supplementary service
D.240	03-1991	Charging and accounting principles for teleservices supported by the ISDN
D.250	07-1991	General charging and accounting principles for non-voice services provided by interworking between the ISDN and existing public data networks
D.251	11-1988	General charging and accounting principles for the basic telephone service provided over the ISDN or by interconnection between the ISDN and the public switched telephone network
D.260	03-1991	Charging and accounting capabilities to be applied on the ISDN
D.280	03-1995	Principles for charging and billing, accounting and reimbursements for universal personal telecommunication
D.285	07-1996	Guiding principles for charging and accounting for intelligent network supported services
D.286	07-1996	Charging and accounting principles for the global virtual network service
D.300R	03-1995	Determination of accounting rate shares in telephone relations between countries in Europe and the Mediterranean Basin
D.301R	03-1995	Determination of accounting rate shares and collection charges in telex relations between countries in Europe and the Mediterranean Basin
D.302R	03-1995	Determination of the accounting rate shares and collection charges for the international public telegram service applicable to telegrams exchanged between countries in Europe and the Mediterranean Basin
D.303R	03-1995	Determination of accounting rate shares and collection charges applicable by countries in Europe and the Mediterranean Basin to the occasional provision of circuits for sound- and television-programme transmissions
D.306R	07-1991	Remuneration of public packet-switched data transmission networks between the countries of Europe and the Mediterranean Basin
D.307R	03-1995	Remuneration of digital systems and channels used in telecommunication relations between the countries of Europe and the Mediterranean Basin
D.310R	03-1995	Determination of rentals for the lease of international programme (sound- and television-) circuits and associated control circuits for private service in relations between countries in Europe and the Mediterranean Basin
D.400R	12-1999	Accounting rates applicable to direct traffic relations in voice telephony between countries in Latin America and the Caribbean
D.500R	06-1998	Accounting rates applicable to telephone relations between countries in Asia and Oceania

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D.501R	10-1993	Accounting rates applicable to telex relations between countries in Asia and Oceania	
D.600R	10-2000	Cost methodology for the regional tariff group for Africa applicable to the international automatic telephone service	
D.601R	10-1993	Determination of accounting rate shares and collection charges in telex relations between countries in Africa	
D.602R	12-2002	Application of the "sender pays transit" principle in transit relation	
D.603R	12-2002	Minimizing collection charges on inter-African calls	
D.604R	01-2005	The last international transit center pays the traffic	
D.606R	11-1988	Preferential rates in telecommunication relations between countries in Africa	
D.Sup1	11-1988	Cost and tariff study method	Available only in PDF.
D.Sup2	11-1988	<a name="D1-4">Method for carrying out a cost price study by regional tariff groups</a>	
D.Sup3	03-1993	Handbook on the methodology for determining costs and establishing national tariffs	

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 $Series \ E : Overall \ network \ operation, \ telephone \ service, \ service \ operation \ and \ human \ factors$ 

Number	Approval Date	Recommendation Title	Status
		Overall network operation, telephone service, service operation and human factors	
E.100	11-1988	Definitions of terms used in international telephone operation	
E.104	02-1995	International telephone directory assistance service and public access	
E.105	08-1992	International telephone service	
E.106	10-2003	International Emergency Preference Scheme (IEPS) for disaster relief operations	
E.109	02-1995	International billed number screening procedures for collect and third-party calling	
E.110	11-1988	Organization of the international telephone network	
E.111	11-1988	Extension of international telephone services	
E.112	11-1988	Arrangements to be made for controlling the telephone services between two countries	
E.113	05-1997	Validation procedures for the international telecommunications charge card service	
E.114	11-1988	Supply of lists of subscribers (directories and other means)	
E.115	02-1995	Computerized directory assistance	
E.116	05-1997	International telecommunication charge card service	
E.117	06-1994	Terminal devices used in connection with the public telephone service (other than telephones)	
E.118	02-2001	The international telecommunication charge card	
E.120	11-1988	Instructions for users of the international telephone service	
E.121	06-2004	Pictograms, symbols and icons to assist users of the telephone and telefax services	
E.121 (2004) Erratum 1	10-2004		
E.122	11-1988	Measures to reduce customer difficulties in the international telephone service	
E.123	02-2001	Notation for national and international telephone numbers, e-mail addresses and Web addresses	
E.124	11-1988	Discouragement of frivolous international calling to unassigned or vacant numbers answered by recorded announcements without charge	
E.125	10-1984	Inquiries among users of the international telephone service	
E.126	11-1988	Harmonization of the general information pages of the telephone directories published by Administrations	
E.127	11-1988	Pages in the telephone directory intended for foreign visitors	

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E.128	11-1988	Leaflet to be distributed to foreign visitors	
E.129	09-2002	Presentation of national numbering plans	
E.130	11-1988	Choice of the most useful and desirable supplementary telephone services	
E.131	11-1988	Subscriber control procedures for supplementary telephone services	
E.132	11-1988	Standardization of elements of control procedures for supplementary telephone services	
E.133	11-1988	Operating procedures for cardphones	
E.134	03-1993	Human factors aspects of public terminals: Generic operating procedures	
E.135	10-1995	Human factors aspects of public telecommunication terminals for people with disabilities	
E.136	05-1997	Specification of a tactile identifier for use with telecommunication cards	
E.137	05-1997	User instructions for payphones	
E.138	06-2002	Human factors aspects of public telephones to improve their usability for older people	
E.138 Erratum 1	02-2003		
E.140	08-1992	Operator-assisted telephone service	
E.148	11-1988	Routing of traffic by automatic transit exchanges	
E.149	11-1988	Presentation of routing data	
E.151	08-1992	Telephone conference calls	
E.152	02-2001	International freephone service	
E.153	10-1996	Home country direct	
E.154	03-1998	International Shared Cost Service	
E.155	03-1998	International Premium Rate Service	
E.155 (1998) Amendment 1	02-2001		
E.161	02-2001	Arrangement of digits, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network	
E.164	02-2005	The international public telecommunication numbering plan	Pre-published.
E.164 Supplement 1	03-1998	Alternatives for carrier selection and network identification	
E.164 Supplement 2	11-1998	Number Portability	
E.164 Supplement 3	05-2004	Operational and administrative issues associated with national implementations of the ENUM functions	
E.164 Supplement 4	05-2004	Operational and administrative issues associated with the implementation of ENUM for non-geographic country codes	

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E.164.1	02-2005	Criteria and procedures for the reservation, assignment and reclamation of E.164 country codes and associated identification codes (ICs)
E.164.2	02-2001	E.164 numbering resources for trials
E.164.3	09-2001	Principles, criteria and procedures for the assignment and reclamation of E.164 country codes and associated identification codes for groups of countries
E.165	11-1988	Timetable for coordinated implementation of the full capability of the numbering plan for the ISDN era (Recommendation E.164)
E.165.1	10-1996	Use of escape code "0" within the E.164 numbering plan during the transition period to implementation of NPI mechanism
E.166/X.122	03-1998	Numbering plan interworking for the E.164 and X.121 numbering plans
E.167	11-1988	ISDN Network Identification Codes
E.168	05-2002	Application of E.164 numbering plan for UPT
E.168 Amendment 1	05-2004	New Appendix I
E.168.1	02-2005	Assignment procedures for universal personal telecommunications (UPT) Pre-published. numbers in the provisioning of the international UPT service
E.169	05-2002	Application of Recommendation E.164 numbering plan for universal international numbers for international telecommunications services using country codes for global services
E.169.1	09-2001	Application of Recommendation E.164 numbering plan for universal international freephone numbers for international freephone service
E.169.2	10-2000	Application of Recommendation E.164 numbering plan for universal international premium rate numbers for the international premium rate service
E.169.3	10-2000	Application of Recommendation E.164 numbering plan for universal international shared cost numbers for international shared cost service
E.170	10-1992	Traffic routing
E.172	10-1992	ISDN routing plan
E.173	08-1991	Routing plan for interconnection between public land mobile networks and fixed terminal networks
E.174	04-1995	Routing principles and guidance for Universal Personal Telecommunications (UPT)
E.175	11-1988	Models for international network planning
E.177	10-1996	B-ISDN routing
E.180/Q.35	03-1998	Technical characteristics of tones for the telephone service
E.181	11-1988	Customer recognition of foreign tones
E.182	03-1998	Application of tones and recorded announcements in telephone services
E.183	03-1998	Guiding principles for telephone announcements
E.184	11-1988	Indications to users of ISDN terminals

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E.190	05-1997	Principles and responsibilities for the management, assignment and reclamation of E-series international numbering resources
E.191	03-2000	B-ISDN addressing
E.191 (2000) Corrigendum 1	02-2002	
E.191.1	02-2001	Criteria and procedures for the allocation of ITU-T International Network Designator addresses
E.193	03-2000	E.164 country code expansion
E.195	10-2000	ITU-T International numbering resource administration
E.202	10-1992	Network operational principles for future public mobile systems and services
E.210	11-1988	Ship station identification for VHF/UHF and maritime mobile-satellite services
E.212	05-2004	The international identification plan for mobile terminals and mobile users
E.212 (2004) Erratum 1	10-2004	
E.213	11-1988	Telephone and ISDN numbering plan for land mobile stations in public land mobile networks (PLMN)
E.214	02-2005	Structure of the land mobile global title for the signalling connection control part (SCCP)
E.217	05-2002	Maritime communications – Ship station identity
E.218	05-2004	Management of the allocation of terrestrial trunk radio Mobile Country Codes
E.220	02-1996	Interconnection of public land mobile networks (PLMN)
E.230	08-1992	Chargeable duration of calls
D.103	06-1992	Charging in automatic service for calls terminating on a recorded announcement stating the reason for the call not being completed
D.104	11-1988	Charging for calls to subscriber's station connected either to the absent subscriber's service or to a device substituting a subscriber in his absence
E.260	11-1988	Basic technical problems concerning the measurement and recording of call durations
E.261	11-1988	Devices for measuring and recording call durations
D.170	06-1998	Monthly telephone and telex accounts
E.300	11-1988	Special uses of circuits normally employed for automatic telephone traffic
E.301	03-1993	Impact of non-voice applications on the telephone network
E.320	11-1988	Speeding up the establishment and clearing of phototelegraph calls
F.107	11-1988	Rules for phototelegraph calls established over circuits normally used for telephone traffic
E.330	11-1988	User control of ISDN-supported services

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E.331	10-1991	Minimum user-terminal interface for a human user entering address information into an ISDN terminal
Z.323	11-1988	Man-machine interaction
E.350	03-2000	Dynamic routing interworking
E.351	03-2000	Routing of multimedia connections across TDM-, ATM- and IP-based networks
E.352	03-2000	Routing guidelines for efficient routing methods
E.353	02-2001	Routing of calls when using international network routing addresses
E.360.1	05-2002	Framework for QoS routing and related traffic engineering methods for IP-, ATM-, and TDM-based multiservice networks
E.360.2	05-2002	QoS routing and related traffic engineering methods – Call routing and connection routing methods
E.360.3	05-2002	QoS routing and related traffic engineering methods – QoS resource management methods
E.360.4	05-2002	QoS routing and related traffic engineering methods – Routing table management methods and requirements
E.360.5	05-2002	QoS routing and related traffic engineering methods – Transport routing methods
E.360.6	05-2002	QoS routing and related traffic engineering methods – Capacity management methods
E.360.7	05-2002	QoS routing and related traffic engineering methods – Traffic engineering operational requirements
E.361	05-2003	QoS routing support for interworking of QoS service classes across routing technologies
E.370	02-2001	Service principles when public circuit-switched international telecommunication networks interwork with IP-based networks
E.401	11-1988	Statistics for the international telephone service (number of circuits in operation and volume of traffic)
E.408	05-2004	Telecommunication networks security requirements
E.409	05-2004	Incident organization and security incident handling: Guidelines for telecommunication organizations
E.410	03-1998	International network management – General information
E.411	03-2000	International network management – Operational guidance
E.411 (2000) Amendment 1	03-2001	
E.412	01-2003	Network management controls
E.413	11-1988	International network management – Planning
E.414	11-1988	International network management – Organization
E.415	08-1991	International network management guidance for common channel signalling system No. 7
E.416	03-2000	Network management principles and functions for B-ISDN traffic

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E.417	02-2005	Framework for the network management of IP-based networks	Pre-published.
E.418	05-2003	Framework for network management of IMT-2000 networks	
E.420	11-1988	Checking the quality of the international telephone service – General considerations	
E.421	11-1988	Service quality observations on a statistical basis	
E.422	02-1996	Observations on international outgoing telephone calls for quality of service	
E.423	11-1988	Observations on traffic set up by operators	
E.424	10-1992	Test calls	
E.425	03-2002	Internal automatic observations	
E.426	10-1992	General guide to the percentage of effective attempts which should be observed for international telephone calls	
E.427	11-1988	Collection and statistical analysis of special quality of service observation data for measurements of customer difficulties in the international automatic service	
E.428	10-1992	Connection retention	
E.430	06-1992	Quality of service framework	
E.431	06-1992	Service quality assessment for connection set-up and release delays	
E.432	06-1992	Connection quality	
E.433	06-1992	Billing integrity	
E.434	06-1992	Subscriber-to-subscriber measurement of the public switched telephone network	
E.436	03-1998	Customer Affecting Incidents and blocking Defects Per Million	
E.437	05-1999	Comparative metrics for network performance management	
E.438	03-2000	Performance parameters and measurement methods to assess N-ISDN 64 kbit/s circuit-switched bearer service UDI in operation	
E.439	03-2000	Test call measurement to assess N-ISDN 64 kbit/s circuit-switched bearer service UDI in operation	
E.440	02-1996	Customer satisfaction point	
E.450	03-1998	Facsimile quality of service on public networks – General aspects	
E.451	02-2001	Facsimile call cut-off performance	
E.452	03-1993	Facsimile modem speed reductions and transaction time	
E.453	08-1994	Facsimile image quality as corrupted by transmission-induced scan line errors	
E.454	10-1996	Transmission performance metrics based on Error Correction Mode (ECM) facsimile	
E.456	03-1998	Test transaction for facsimile transmission performance	

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E.457	02-1996	Facsimile measurement methodologies
E.458	02-1996	Figure of merit for facsimile transmission performance
E.459	03-1998	Measurements and metrics for characterizing facsimile transmission performance using non-intrusive techniques
E.460	03-2000	Measurements and metrics for monitoring the performance of V.34 Group 3 Facsimile
E.470	02-2005	Operational considerations for QoS of voice over IP-based networks with Pre-published. PSTN-IP-PSTN architecture
E.490	06-1992	Traffic measurement and evaluation – General survey
E.490.1	01-2003	Overview of Recommendations on traffic engineering
E.491	05-1997	Traffic measurement by destination
E.492	02-1996	Traffic reference period
E.493	02-1996	Grade of service (GOS) monitoring
E.500	11-1998	Traffic intensity measurement principles
E.501	05-1997	Estimation of traffic offered in the network
E.502	02-2001	Traffic measurement requirements for digital telecommunication exchanges
E.503	06-1992	Traffic measurement data analysis
E.504	11-1988	Traffic measurement administration
E.505	06-1992	Measurements of the performance of common channel signalling network
E.506	06-1992	Forecasting international traffic
E.507	11-1988	Models for forecasting international traffic
E.508	10-1992	Forecasting new telecommunication services
E.520	11-1988	Number of circuits to be provided in automatic and/or semiautomatic operation, without overflow facilities
E.521	11-1988	Calculation of the number of circuits in a group carrying overflow traffic
E.522	11-1988	Number of circuits in a high-usage group
E.523	11-1988	Standard traffic profiles for international traffic streams
E.524	05-1999	Overflow approximations for non-random inputs
E.525	06-1992	Designing networks to control grade of service
E.526	03-1993	Dimensioning a circuit group with multi-slot bearer services and no overflow inputs
E.527	03-2000	Dimensioning at a circuit group with multi-slot bearer services and overflow traffic
E.528	02-1996	Dimensioning of digital circuit multiplication equipment (DCME) systems

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E.529	05-1997	Network dimensioning using end-to-end GOS objectives
E.540	11-1988	Overall grade of service of the international part of an international connection
E.541	11-1988	Overall grade of service for international connections (subscriber-to- subscriber)
E.543	11-1988	Grades of service in digital international telephone exchanges
E.550	03-1993	Grade-of-service and new performance criteria under failure conditions in international telephone exchanges
E.600	03-1993	Terms and definitions of traffic engineering
E.651	03-2000	Reference connections for traffic engineering of IP access networks
E.671	03-2000	Post-selection delay in PSTN/ISDN networks using Internet telephony for a portion of the connection
E.681	10-2001	Traffic engineering methods for IP acess networks based on hybrid fiber/coax system
E.700	10-1992	Framework of the E.700-Series Recommendations
E.701	10-1992	Reference connections for traffic engineering
E.711	10-1992	User demand modelling
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F.185	06-1998	Internet facsimile: Guidelines for the support of the communication of facsimile documents
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F.350	11-1988	Application of Series T Recommendations
F.351	11-1988	General principles on the presentation of terminal identification to users of the telematic services
F.353	11-1988	Provision of telematic and data transmission services on integrated services digital network (ISDN)
F.400/X.400	06-1999	Message handling system and service overview
F.401	08-1992	Message handling services: Naming and addressing for public message handling services
F.410	08-1992	Message handling services: The public message transfer service
F.415	11-1988	Message handling services: Intercommunication with public physical delivery services
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F.423	08-1992	Message handling services: Intercommunication between the interpersonal messaging service and the telefax service	
F.435	06-1999	Message handling services: Electronic Data Interchange messaging service	
F.440	08-1992	Message handling services: The voice messaging service	
F.471	08-1997	Operational requirements for the interconnection of voice-mail store-and-forward units	
F.471 (1997) Corrigendum 1	09-1998		
F.472	08-1997	Service and operational requirements of the voice-mail store-and-forward service	
F.500	08-1992	International public directory services	
F.510	02-2003	Automated directory assistance – White pages service definition	
F.515	04-2003	Unified Directory specification	
F.581	03-1993	Guidelines for programming communication interfaces (PCIs) definition: Service Recommendation	
F.600	04-2004	Service and operational principles for public data transmission service	
F.700	11-2000	Framework Recommendation for multimedia services	
F.701	11-2000	Guideline Recommendation for identifying multimedia service requirements	
F.702	07-1996	Multimedia conference services	
F.703	11-2000	Multimedia conversational services	
F.720	08-1992	Videotelephony services – General	
F.721	08-1992	Videotelephony teleservice for ISDN	
F.723	07-1996	Videophone service in the Public Switched Telephone Network (PSTN)	
F.731	07-1997	Multimedia Conference Services in the ISDN	
F.732	10-1996	Multimedia conference services in the B-ISDN	
F.740	08-1993	Audiovisual interactive services	
F.750	02-2005	Metadata framework	Pre-published.
F.761	11-1988	Service-oriented requirements for telewriting applications	
F.811	07-1996	Broadband connection-oriented bearer service	
F.812	08-1992	Broadband connectionless data bearer service	
F.813	02-1995	Virtual path service for reserved and permanent communications	

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F.850	03-1993	Principles of Universal Personal Telecommunication (UPT)
F.851	02-1995	Universal Personal Telecommunication (UPT) – Service description (service set 1)
F.852	03-2000	Universal Personal Telecommunication (UPT) – Service description (service set 2)
F.853	11-1998	Supplementary services in the Universal Personal Telecommunication (UPT) environment
F.901	03-1993	Usability evaluation of telecommunication services
F.902	02-1995	Interactive services design guidelines
F.910	02-1995	Procedures for designing, evaluating and selecting symbols, pictograms and icons
F.Sup1	11-1988	Definitions relating to telegraph, telematic and data transmission services
F.Sup2	11-1988	<a name="F1-7">Terms and definitions for telex</a>

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		Transmission systems and media, digital systems and networks	
G.100	02-2001	Definitions used in Recommendations on general characteristics of	
G.100	02-2001	international telephone connections and circuits	
G.100.1	11-2001	The use of the decibel and of relative levels in speechband telecommunications	
G.101	11-2003	The transmission plan	
G.102	11-1988	Transmission performance objectives and Recommendations	
G.103	12-1998	Hypothetical reference connections	
G.105	11-1988	Hypothetical reference connection for crosstalk studies	
G.107	03-2005	The E-model, a computational model for use in transmission planning	Pre-published.
G.108	09-1999	Application of the E-model: A planning guide	
G.108 Erratum 1	12-2000		
G.108 (1999) Amendment 1	09-2003	New Appendix I – The relationship between and interaction of talker echo and absolute delay	
G.108 (1999) Amendment 2	03-2004	New Appendix II – Planning examples regarding delay in packet-based networks	
G.108.1	05-2000	Guidance for assessing conversational speech transmission quality effects not covered by the E-model	
G.108.2	01-2003	Transmission planning aspects of echo cancellers	
G.109	09-1999	Definition of categories of speech transmission quality	
G.111	03-1993	Loudness ratings (LRs) in an international connection	
G.113	02-2001	Transmission impairments due to speech processing	
G.113 Appendix I	05-2002	Provisional planning values for the equipment impairment factor le and packet-loss robustness factor Bpl	
G.114	05-2003	One-way transmission time	
G.114 (2003) Amendment 1	09-2003	New Appendix II: Guidance on one-way delay for Voice over IP	Pre-published.
G.115	02-1996	Mean active speech level for announcement and speech synthesis systems	
G.116	09-1999	Transmission performance objectives applicable to end-to-end international connections	
G.117	02-1996	Transmission aspects of unbalance about earth	
G.120	12-1998	Transmission characteristics of national networks	
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G.122	03-1993	Influence of national systems on stability and talker echo in international connections
G.126	03-1993	Listener echo in telephone networks
G.131	11-2003	Talker echo and its control
G.136	09-1999	Application rules for Automatic Level Control Devices
G.136 Erratum 1	12-2000	
G.142	12-1998	Transmission characteristics of exchanges
G.161	06-2004	Interaction aspects of signal processing network equipment
G.164	11-1988	Echo suppressors
G.165	03-1993	Echo cancellers
G.168	08-2004	Digital network echo cancellers
G.169	07-1999	Automatic level control devices
G.172	11-1988	Transmission plan aspects of international conference calls
G.173	03-1993	Transmission planning aspects of the speech service in digital public land mobile networks
G.174	06-1994	Transmission performance objectives for terrestrial digital wireless systems using portable terminals to access the PSTN
G.175	05-2000	Transmission planning for private/public network interconnection of voice traffic
G.176	04-1997	Planning guidelines for the integration of ATM technology into networks supporting voiceband services
G.177	09-1999	Transmission planning for voiceband services over hybrid Internet/PSTN connections
G.180	03-1993	Characteristics of N + M type direct transmission restoration systems for use on digital and analogue sections, links or equipment $ \frac{1}{2} \left( \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} \right) \left( \frac$
G.181	03-1993	Characteristics of 1 + 1 type restoration systems for use on digital transmission links
G.191	11-2000	Software tools for speech and audio coding standardization
G.192	03-1996	A common digital parallel interface for speech standardization activities
G.211	11-1988	Make-up of a carrier link
G.212	11-1988	Hypothetical reference circuits for analogue systems
G.213	11-1988	Interconnection of systems in a main repeater station
G.214	11-1988	Line stability of cable systems
G.215	11-1988	Hypothetical reference circuit of 5000 km for analogue systems
G.221	11-1988	Overall recommendations relating to carrier-transmission systems
G.222	11-1988	Noise objectives for design of carrier-transmission systems of 2500 km

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G.223	11-1988	Assumptions for the calculation of noise on hypothetical reference circuits for telephony
G.224	11-1988	Maximum permissible value for the absolute power level (power referred to one milliwatt) of a signalling pulse
G.225	11-1988	Recommendations relating to the accuracy of carrier frequencies
G.226	11-1988	Noise on a real link
G.227	11-1988	Conventional telephone signal
G.228	11-1988	Measurement of circuit noise in cable systems using a uniform-spectrum random noise loading
G.229	11-1988	Unwanted modulation and phase jitter
G.230	11-1988	Measuring methods for noise produced by modulating equipment and through-connection filters
G.231	11-1988	Arrangement of carrier equipment
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G.233	11-1988	Recommendations concerning translating equipments
G.241	11-1988	Pilots on groups, supergroups, etc.
G.242	11-1988	Through-connection of groups, supergroups, etc.
G.243	11-1988	Protection of pilots and additional measuring frequencies at points where there is a through-connection
G.322	11-1988	General characteristics recommended for systems on symmetric pair cables
G.325	11-1988	General characteristics recommended for systems providing 12 telephone carrier circuits on a symmetric cable pair [(12 + 12) systems]
G.332	11-1988	12 MHz systems on standardized 2.6/9.5 mm coaxial cable pairs
G.333	11-1988	60 MHz systems on standardized 2.6/9.5 mm coaxial cable pairs
G.334	11-1988	18 MHz systems on standardized 2.6/9.5 mm coaxial cable pairs
G.341	11-1988	1.3 MHz systems on standardized 1.2/4.4 mm coaxial cable pairs
G.343	11-1988	4 MHz systems on standardized 1.2/4.4 mm coaxial cable pairs
G.344	11-1988	6 MHz systems on standardized 1.2/4.4 mm coaxial cable pairs
G.345	11-1988	12 MHz systems on standardized 1.2/4.4 mm coaxial cable pairs
G.346	11-1988	18 MHz systems on standardized 1.2/4.4 mm coaxial cable pairs
G.352	11-1988	Interconnection of coaxial carrier systems of different designs
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G.421	11-1988	Methods of interconnection
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G.423	11-1988	Interconnection at the baseband frequencies of frequency-division multiplex radio-relay systems	
G.431	11-1988	Hypothetical reference circuits for frequency-division multiplex radio-relay systems	
G.441	11-1988	Permissible circuit noise on frequency-division multiplex radio-relay systems	
G.442	11-1988	Radio-relay system design objectives for noise at the far end of a hypothetical reference circuit with reference to telegraphy transmission	
G.451	11-1988	Use of radio links in international telephone circuits	
G.601	11-1988	Terminology for cables	
G.602	11-1988	Reliability and availability of analogue cable transmission systems and associated equipments	
G.611	11-1988	Characteristics of symmetric cable pairs for analogue transmission	
G.612	11-1988	Characteristics of symmetric cable pairs designed for the transmission of systems with bit rates of the order of 6 to 34 Mbit/s	
G.613	11-1988	Characteristics of symmetric cable pairs usable wholly for the transmission of digital systems with a bit rate of up to 2 Mbit/s	
G.614	11-1988	Characteristics of symmetric pair star-quad cables designed earlier for analogue transmission systems and being used now for digital system transmission at bit rates of 6 to 34 Mbit/s	
G.621	11-1988	Characteristics of 0.7/2.9 mm coaxial cable pairs	
G.622	11-1988	Characteristics of 1.2/4.4 mm coaxial cable pairs	
G.623	11-1988	Characteristics of 2.6/9.5 mm coaxial cable pairs	
G.631	11-1988	Types of submarine cable to be used for systems with line frequencies of less than about 45 MHz	
G.650.1	06-2004	Definitions and test methods for linear, deterministic attributes of single-mode fibre and cable	
G.650.2	01-2005	Definitions and test methods for statistical and non-linear related attributes of single-mode fibre and cable	Pre-published.
G.651	02-1998	Characteristics of a 50/125 $\mu m$ multimode graded index optical fibre cable	
G.652	03-2003	Characteristics of a single-mode optical fibre and cable	
G.653	12-2003	Characteristics of a dispersion-shifted single-mode optical fibre and cable	
G.654	06-2004	Characteristics of a cut-off shifted single-mode optical fibre and cable	
G.655	03-2003	Characteristics of a non-zero dispersion-shifted single-mode optical fibre and cable	
G.656	06-2004	Characteristics of a fibre and cable with non-zero dispersion for wideband optical transport	
G.661	10-1998	Definition and test methods for the relevant generic parameters of optical amplifier devices and subsystems	
G.662	10-1998	Generic characteristics of optical amplifier devices and subsystems	
G.663	04-2000	Application related aspects of optical amplifier devices and subsystems	

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G.663 (2000) Amendment 1	01-2003	Amendements to Appendix II
G.664	03-2003	Optical safety procedures and requirements for optical transport systems
G.664 (2003) Amendment 1	01-2005	
G.665	01-2005	Generic characteristics of Raman amplifiers and Raman amplified subsystems
G.671	01-2005	Transmission characteristics of optical components and subsystems
G.691	12-2003	Optical interfaces for single channel STM-64 and other SDH systems with optical amplifiers
G.691 (2003) Amendment 1	01-2005	
G.692	10-1998	Optical interfaces for multichannel systems with optical amplifiers
G.692 (1998) Corrigendum 1	01-2000	
G.692 (1998) Corrigendum 2	06-2002	
G.692 (1998) Amendment 1	01-2005	
G.693	01-2005	Optical interfaces for intra-office systems
G.694.1	06-2002	Spectral grids for WDM applications: DWDM frequency grid
G.694.2	12-2003	Spectral grids for WDM applications: CWDM wavelength grid
G.695	01-2005	Optical interfaces for coarse wavelength division multiplexing applications
G.697	06-2004	Optical monitoring for DWDM systems
G.701	03-1993	Vocabulary of digital transmission and multiplexing, and pulse code modulation (PCM) terms
G.702	11-1988	Digital hierarchy bit rates
G.703	11-2001	Physical/electrical characteristics of hierarchical digital interfaces
G.704	10-1998	Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels
G.705	10-2000	Characteristics of plesiochronous digital hierarchy (PDH) equipment functional blocks
G.706	04-1991	Frame alignment and cyclic redundancy check (CRC) procedures relating to basic frame structures defined in Recommendation G.704
G.707/Y.1322	12-2003	Network node interface for the synchronous digital hierarchy (SDH)
G.707/Y.1322 (2003) Corrigendum 1	06-2004	
G.707/Y.1322 Amendment 1	08-2004	

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G.708	07-1999	Sub STM-0 network node interface for the synchronous digital hierarchy (SDH)	
G.709/Y.1331	03-2003	Interfaces for the Optical Transport Network (OTN)	
G.709/Y.1331 (2003) Amendment 1	12-2003		Pre-published.
G.711	11-1988	Pulse code modulation (PCM) of voice frequencies	
G.711 Appendix I	09-1999	A high quality low-complexity algorithm for packet loss concealment with G.711	
G.711 Appendix II	02-2000	A comfort noise payload definition for ITU-T G.711 use in packet-based multimedia communication systems	
G.712	11-2001	Transmission performance characteristics of pulse code modulation channels	
G.720	07-1995	Characterization of low-rate digital voice coder performance with non-voice signals	
G.722	11-1988	7 kHz audio-coding within 64 kbit/s	
G.722 (1988) Erratum 1	05-2003		
G.722 Annex A	03-1993	Testing signal-to-total distortion ratio for 7 kHz audio-codecs at 64 kbit/s Recommendation G.722 connected back-to-back	
G.722 Appendix II	03-1987	Digital test sequences for the verification of the G.722 64 kbit/s SB-ADPCM 7 kHz codec	
G.722.1	09-1999	Coding at 24 and 32 kbit/s for hands-free operation in systems with low frame loss	Available only in MS Word.
G.722.1 (1999) Corrigendum 1	11-2000		
G.722.1 Annex A	02-2000	Packet format, capability identifiers and capability parameters	
G.722.1 Annex B	11-2000	Floating-point implementation for G.772.1	Available only in MS Word.
G.722.2	07-2003	Wideband coding of speech at around 16 kbit/s using Adaptive Multi-Rate Wideband (AMR-WB)	
G.722.2 (2003) Erratum 1	06-2004		
G.722.2 Annex A	01-2002	Comfort noise aspects	
G.722.2 Annex B	01-2002	Source Controlled Rate operation	
G.722.2 Annex B (2002) Erratum 1	07-2003		
G.722.2 Annex C	03-2004	Fixed-point C-code	
G.722.2 Annex C (2004) Erratum 1	06-2004		
G.722.2 Annex D	07-2003	Digital test sequences	
G.722.2 Annex E	01-2002	Frame structure	

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G.722.2 Annex E (2002) Corrigendum 1	07-2003		
G.722.2 Annex F	11-2002	AMR-WB usage in H.245	
G.722.2 Appendix 1	01-2002	Error concealment of erroneous or lost frames	
G.722.2 Appendix I (2002) Amendment 1	07-2003		
		Speech coders	
G.723.1	03-1996	Dual rate speech coder for multimedia communications transmitting at 5.3 and 6.3 kbit/s	
G.723.1 Annex A	11-1996	Silence compression scheme	
G.723.1 Annex B	11-1996	Alternative specification based on floating point arithmetic	
G.723.1 Annex C	11-1996	Scalable channel coding scheme for wireless applications	
G.724	11-1988	Characteristics of a 48-channel low bit rate encoding primary multiplex operating at 1544 kbit/s	
G.725	11-1988	System aspects for the use of the 7 kHz audio codec within 64 kbit/s	
G.726	12-1990	40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)	
G.726 Annex A	11-1994	Extensions of Recommendation G.726 for use with uniform-quantized input and output	
G.726 Annex B	07-2003	Packet format, capability identifier and capability parameters for H.245 signalling	
G.726 App II test vectors	03-1991	Digital test sequences for the verification of the G.726 40, 32, 24 and 16 kbit/s ADPCM algorithm	Available only in MS Word.
G.726 Appendix III	05-1994	Comparison of ADPCM algorithms	
G.727	12-1990	5-, 4-, 3- and 2-bit/sample embedded adaptive differential pulse code modulation (ADPCM)	
G.727 Annex A	11-1994	Extensions of Recommendation G.727 for use with uniform-quantized input and output	
G.727 App I test vectors	03-1991	Digital test sequences for the verification of the G.727 5-, 4-, 3- and 2-bit/sample embedded ADPCM algorithm	Available only in MS Word.
G.727 Appendix II	05-1994	Comparison of ADPCM algorithms	
G.728	09-1992	Coding of speech at 16 kbit/s using low-delay code excited linear prediction	
G.728 Annex G	11-1994	16 kbit/s fixed point specification	
G.728 Annex G (1994) Corrigendum 1	02-2000		

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G.728 Annex H	05-1999	Variable bit rate LD-CELP operation mainly for DCME at rates less than 16 kbit/s	
G.728 Annex I	05-1999	Frame or packet loss concealment for the LD-CELP decoder	
G.728 Annex J	09-1999	Variable bit-rate operation of LD-CELP mainly for voiceband-data applications in DCME	
G.728 Appendix I	07-1995	Programs and test sequences for implementation verification of the algorithm of the G.728 16 kbit/s LD-CELP speech coder	
G.728 Appendix II	11-1995	Speech performance	
G.729	03-1996	Coding of speech at 8 kbit/s using conjugate-structure algebraic-code- excited linear prediction (CS-ACELP)	
G.729 Annex A	11-1996	Reduced complexity 8 kbit/s CS-ACELP speech codec	
G.729 Annex B	10-1996	A silence compression scheme for G.729 optimized for terminals conforming to Recommendation V.70	Available only in MS Word.
G.729 Annex B (1996) Cor.1	02-1998		Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
G.729 Annex B (1996) Corrigendum 2	02-2000		
G.729 Annex B (1996) Corrigendum 3	03-2001		
G.729 Annex C	09-1998	Reference floating-point implementation for G.729 CS-ACELP 8 kbit/s speech coding	
G.729 Annex C+	02-2000	Reference floating-point implementation for integrating G.729 CS-ACELP speech coding main body with Annexes B, D and E	
G.729 Annex C+ (2000) Corrigendum 1	03-2001		
G.729 Annex D	09-1998	6.4 kbit/s CS-ACELP speech coding algorithm	Available only in MS Word.
G.729 Annex D (1998) Corrigendum 1	02-2000		
G.729 Annex E	09-1998	11.8 kbit/s CS-ACELP speech coding algorithm	Available only in MS Word.
G.729 Annex E (1998) Corrigendum 1	02-2000		
G.729 Annex F	02-2000	Reference implementation of G.729 Annex B DTX functionality for Annex D	
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G.729 Annex G	02-2000	Reference implementation of G.729 Annex B DTX functionality for Annex E	
G.729 Annex G (2000) Corrigendum 1	03-2001		
G.729 Annex H	02-2000	Reference implementation of switching procedure between G.729 Annexes D and E	Available only in MS Word.
G.729 Annex I	02-2000	Reference fixed-point implementation for integrating G.729 CS-ACELP speech coding main body with Annexes B, D and E	
G.729 Annex I (2000) Corrigendum 1	03-2001		
G.729 Appendix I	06-2001	External synchronous reset performance for G.729 codecs in systems using external VAD/DTX/CNG	
G.731	11-1988	Primary PCM multiplex equipment for voice frequencies	
G.732	11-1988	Characteristics of primary PCM multiplex equipment operating at 2048 kbit/s	
G.733	11-1988	Characteristics of primary PCM multiplex equipment operating at 1544 kbit/s	
G.734	11-1988	Characteristics of synchronous digital multiplex equipment operating at 1544 kbit/s	
G.735	11-1988	Characteristics of primary PCM multiplex equipment operating at 2048 kbit/s and offering synchronous digital access at 384 kbit/s and/or 64 kbit/s	
G.736	03-1993	Characteristics of a synchronous digital multiplex equipment operating at 2048 kbit/s	
G.737	11-1988	Characteristics of an external access equipment operating at 2048 kbit/s offering synchronous digital access at 384 kbit/s and/or 64 kbit/s	
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G.739	11-1988	Characteristics of an external access equipment operating at 2048 kbit/s offering synchronous digital access at 320 kbit/s and/or 64 kbit/s	
G.741	11-1988	General considerations on second order multiplex equipments	
G.742	11-1988	Second order digital multiplex equipment operating at 8448 kbit/s and using positive justification	
G.743	11-1988	Second order digital multiplex equipment operating at 6312 kbit/s and using positive justification	
G.744	11-1988	Second order PCM multiplex equipment operating at 8448 kbit/s	
G.745	11-1988	Second order digital multiplex equipment operating at 8448 kbit/s and using positive/zero/negative justification	
G.746	11-1988	Characteristics of second order PCM multiplex equipment operating at 6312 kbit/s	
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G.751	11-1988	Digital multiplex equipments operating at the third order bit rate of 34 368 kbit/s and the fourth order bit rate of 139 264 kbit/s and using positive justification
G.752	11-1988	Characteristics of digital multiplex equipments based on a second order bit rate of 6312 kbit/s and using positive justification
G.753	11-1988	Third order digital multiplex equipment operating at 34 368 kbit/s and using positive/zero/negative justification
G.754	11-1988	Fourth order digital multiplex equipment operating at 139 264 kbit/s and using positive/zero/negative justification
G.755	11-1988	Digital multiplex equipment operating at 139 264 kbit/s and multiplexing three tributaries at 44 736 kbit/s
G.761	11-1988	General characteristics of a 60-channel transcoder equipment
G.762	11-1988	General characteristics of a 48-channel transcoder equipment
G.763	10-1998	Digital circuit multiplication equipment using G.726 ADPCM and digital speech interpolation
G.763 Erratum 1	12-2000	
G.764	12-1990	Voice packetization – Packetized voice protocols
G.764 Appendix I	11-1995	Packetization guide
G.765	09-1992	Packet circuit multiplication equipment
G.765 Appendix I	11-1995	A guide to PCME
G.766	11-1996	Facsimile demodulation/remodulation for digital circuit multiplication equipment
G.767	10-1998	Digital circuit multiplication equipment using 16 kbit/s LD-CELP, digital speech interpolation and facsimile demodulation/remodulation
G.768	03-2001	Digital circuit multiplication equipment using 8 kbit/s CS-ACELP
G.769/Y.1242	06-2004	Circuit multiplication equipment optimized for IP-based networks
G.772	03-1993	Protected monitoring points provided on digital transmission systems
G.773	03-1993	Protocol suites for Q-interfaces for management of transmission systems
G.774	02-2001	Synchronous digital hierarchy (SDH) – Management information model for the network element view
G.774.1	02-2001	Synchronous digital hierarchy (SDH) – Bidirectional performance monitoring for the network element view
G.774.2	02-2001	Synchronous digital hierarchy (SDH) – Configuration of the payload structure for the network element view
G.774.3	02-2001	Synchronous digital hierarchy (SDH) – Management of multiplex-section protection for the network element view
G.774.4	02-2001	Synchronous digital hierarchy (SDH) – Management of the subnetwork connection protection for the network element view
G.774.5	02-2001	Synchronous digital hierarchy (SDH) – Management of connection supervision functionality (HCS/LCS) for the network element view

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G.774.6	02-2001	Synchronous digital hierarchy (SDH) – Unidirectional performance monitoring for the network element view
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G.774.8	02-2001	Synchronous digital hierarchy (SDH) – Management of radio-relay systems for the network element view
G.774.9	02-2001	Synchronous digital hierarchy (SDH) – Configuration of linear multiplex-section protection for the network element view
G.774.10	02-2001	Synchronous digital hierarchy (SDH) – Multiplex Section (MS) shared protection ring management for the network element view
G.775	10-1998	Loss of Signal (LOS), Alarm Indication Signal (AIS) and Remote Defect Indication (RDI) defect detection and clearance criteria for PDH signals
G.776.1	10-1998	Managed objects for signal processing network elements
G.776.3	04-2000	ADPCM DCME configuration map report
G.780/Y.1351	07-2004	Terms and definitions for synchronous digital hierarchy (SDH) networks
G.781	07-1999	Synchronization layer functions
G.781 (1999) Corrigendum 1	06-2004	
G.783	02-2004	Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks
G.783 (2004) Corrigendum 1	06-2004	
G.783 (2004) Erratum 1	03-2005	
G.784	07-1999	Synchronous digital hierarchy (SDH) management
G.785	11-1996	Characteristics of a flexible multiplexer in a synchronous digital hierarchy environment
G.791	11-1988	General considerations on transmultiplexing equipments
G.792	11-1988	Characteristics common to all transmultiplexing equipments
G.793	11-1988	Characteristics of 60-channel transmultiplexing equipments
G.794	11-1988	Characteristics of 24-channel transmultiplexing equipments
G.795	11-1988	Characteristics of codecs for FDM assemblies
G.796	09-1992	Characteristics of a 64 kbit/s cross-connect equipment with 2048 kbit/s access ports
G.796 (2000) Corrigendum 1	10-1998	
G.797	03-1996	Characteristics of a flexible multiplexer in a plesiochronous digital hierarchy environment
G.798	06-2004	Characteristics of optical transport network hierarchy equipment functional blocks

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G.799.1/Y.1451.1	06-2004	Functionality and interface specifications for GSTN transport network equipment for interconnecting GSTN and IP networks
G.801	11-1988	Digital transmission models
G.802	11-1988	Interworking between networks based on different digital hierarchies and speech encoding laws
G.803	03-2000	Architecture of transport networks based on the synchronous digital hierarchy (SDH)
G.804	06-2004	ATM cell mapping into plesiochronous digital hierarchy (PDH)
G.805	03-2000	Generic functional architecture of transport networks
G.806	02-2004	Characteristics of transport equipment – Description methodology and generic functionality
G.806 (2004) Amendment 1	06-2004	
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G.808.1	12-2003	Generic protection switching – Linear trail and subnetwork protection
G.808.1 (2003) Erratum 1	03-2005	
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G.810	08-1996	Definitions and terminology for synchronization networks
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G.811	09-1997	Timing characteristics of primary reference clocks
G.812	06-2004	Timing requirements of slave clocks suitable for use as node clocks in synchronization networks
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G.813	03-2003	Timing characteristics of SDH equipment slave clocks (SEC)
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G.821	12-2002	Error performance of an international digital connection operating at a bit rate below the primary rate and forming part of an Integrated Services Digital Network
G.822	11-1988	Controlled slip rate objectives on an international digital connection
G.823	03-2000	The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy
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G.825 Erratum 1	08-2001	
G.826	12-2002	End-to-end error performance parameters and objectives for international, constant bit-rate digital paths and connections
G.827	09-2003	Availability performance parameters and objectives for end-to-end international constant bit-rate digital paths
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G.828 (2000) Corrigendum 1	07-2001	
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G.831	03-2000	Management capabilities of transport networks based on the synchronous digital hierarchy (SDH)
G.832	10-1998	Transport of SDH elements on PDH networks – Frame and multiplexing structures
G.832 (1998) Amendment 1	06-2004	Payload type code for virtual concatenation of 34368 kbit/s signals
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G.841 (1998) Corrigendum 1	08-2002	
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G.851.1	11-1996	Management of the transport network – Application of the RM-ODP framework
G.852.1	11-1996	Enterprise viewpoint for simple subnetwork connection management
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G.852.6	03-1999	Enterprise viewpoint for trail management
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G.852.10	03-1999	Enterprise viewpoint for pre-provisioned link connection management
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G.853.1	03-1999	Common elements of the information viewpoint for the management of a transport network
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G.861	08-1996	Principles and guidelines for the integration of satellite and radio systems in SDH transport networks
G.870/Y.1352	06-2004	Terms and definitions for optical transport networks (OTN)
G.871/Y.1301	10-2000	Framework of Optical Transport Network Recommendations
G.872	11-2001	Architecture of optical transport networks
G.872 (2001) Amendment 1	12-2003	
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G.873.1 Erratum 1	10-2003	
G.874	11-2001	Management aspects of the optical transport network element
G.874.1	01-2002	Optical transport network (OTN): Protocol-neutral management information model for the network element view
G.901	11-1988	General considerations on digital sections and digital line systems
G.902	11-1995	Framework Recommendation on functional access networks (AN) – Architecture and functions, access types, management and service node aspects
G.911	04-1997	Parameters and calculation methodologies for reliability and availability of fibre optic systems
G.921	11-1988	Digital sections based on the 2048 kbit/s hierarchy
G.941	11-1988	Digital line systems provided by FDM transmission bearers
G.950	11-1988	General considerations on digital line systems
G.951	11-1988	Digital line systems based on the 1544 kbit/s hierarchy on symmetric pair cables

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G.953	11-1988	Digital line systems based on the 1544 kbit/s hierarchy on coaxial pair cables	
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G.957 (1999) Amendment 1	12-2003		
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G.964	03-2001	V-Interfaces at the digital local exchange (LE) $-$ V5.1 interface (based on 2048 kbit/s) for the support of access network (AN) $$	
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G.966	02-1999	Access digital section for B-ISDN	
		V-interfaces at the service node (SN)	
G.967.1	06-1998	VB5.1 reference point specification	
G.967.2	02-1999	VB5.2 reference point specification	Available only in MS Word.
G.967.3	03-2000	Protocol implementation conformance statements for interfaces at VB5 reference points	
G.971	06-2004	General features of optical fibre submarine cable systems	
G.972	06-2004	Definition of terms relevant to optical fibre submarine cable systems	
G.973	12-2003	Characteristics of repeaterless optical fibre submarine cable systems	
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G.975.1	02-2004	Forward error correction for high bit-rate DWDM submarine systems
G.976	06-2004	Test methods applicable to optical fibre submarine cable systems
G.977	03-2004	Characteristics of optically amplified optical fibre submarine cable systems
G.981	01-1994	PDH optical line systems for the local network
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G.983.1	01-2005	Broadband optical access systems based on Passive Optical Networks (PON)
G.983.2	06-2002	ONT management and control interface specification for B-PON
G.983.2 (2002) Amendment 1	03-2003	
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G.983.3	03-2001	A broadband optical access system with increased service capability by wavelength allocation
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G.983.4	11-2001	A broadband optical access system with increased service capability using dynamic bandwidth assignment
G.983.4 (2001) Amendment 1	12-2003	New Annex A – Performance monitoring parameters
G.983.4 (2001) Corrigendum 1	01-2005	
G.983.5	01-2002	A broadband optical access system with enhanced survivability
G.983.6	06-2002	ONT management and control interface specifications for B-PON system with protection features
G.983.7	11-2001	ONT Management and Control Interface specification for Dynamic Bandwidth Assignment (DBA) B-PON system
G.983.8	03-2003	B-PON OMCI support for IP, ISDN, video, VLAN tagging, VC cross-connections and other select functions
G.983.9	06-2004	B-PON ONT management and control interface (OMCI) support for wireless Local Area Network interfaces
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G.984.1	03-2003	Gigabit-capable Passive Optical Networks (G-PON): General characteristics
G.984.2	03-2003	Gigabit-capable Passive Optical Networks (G-PON): Physical Media Dependent (PMD) layer specification
G.984.3	02-2004	Gigabit-capable Passive Optical Networks (G-PON): Transmission convergence layer specification

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G.985	03-2003	100 Mbit/s point-to-point Ethernet based optical access system	
G.985 (2003) Corrigendum 1	01-2005		
G.989.1	02-2001	Phoneline networking transceivers – Foundation	
G.989.2	11-2001	Phoneline networking transceivers – Payload format and link layer requirements	
G.989.3	03-2003	Phoneline networking transceivers – Isolation function	
G.991.1	10-1998	High bit rate digital subscriber line (HDSL) transceivers	
G.991.2	12-2003	Single-pair high-speed digital subscriber line (SHDSL) transceivers	
G.991.2 (2003) Amendment 1	07-2004		
G.991.2 (2003) Amendment 2	02-2005		Pre-published.
G.991.2 (2003) Erratum 1	04-2005		
G.992.1	07-1999	Asymmetric digital subscriber line (ADSL) transceivers	
G.992.1 (1999) Corrigendum 1	11-2001		
G.992.1 (1999) Corrigendum 2	07-2002		
G.992.1 (1999) Amendment 1	03-2003	Revised Annex C, new Annex I and new Appendix V	
G.992.1 (1999) Amendment 1 Corrigendum 1	12-2003		Pre-published.
G.992.1 Annex H	10-2000	Specific requirements for a synchronized symmetrical DSL (SSDSL) system operating in the same cable binder as ISDN as defined in ITU-T G.961 Appendix III	
G.992.2	07-1999	Splitterless asymmetric digital subscriber line (ADSL) transceivers	
G.992.2 (1999) Corrigendum 1	07-2002		
G.992.2 (1999) Amendment 1	03-2003	Revised Annex C	
G.992.2 (1999) Amendment 2	10-2003	New Appendix IV: Example overlapped PSD masks for use in a TCM-ISDN crosstalk environment	
G.992.3	01-2005	Asymmetric digital subscriber line transceivers 2 (ADSL2)	Pre-published.
G.992.4	07-2002	Splitterless asymmetric digital subscriber line transceivers 2 (splitterless ADSL2)	
G.992.5	01-2005	Asymmetric Digital Subscriber Line (ADSL) transceivers – Extended bandwidth ADSL2 (ADSL2+)	Pre-published.
G.993.1	06-2004	Very high speed digital subscriber line transceivers	Pre-published.

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G.994.1	05-2003	Handshake procedures for digital subscriber line (DSL) transceivers	
G.994.1 (2003) Amendment 1	02-2004		
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G.994.1 (2003) Amendment 3	01-2005	New codepoints	
G.995.1	02-2001	Overview of digital subscriber line (DSL) Recommendations	
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G.996.1	02-2001	Test procedures for digital subscriber line (DSL) transceivers	
G.996.1 Erratum 1	01-2003		
G.996.1 (2001) Amendment 1	03-2003	New Annex B	
G.997.1	05-2003	Physical layer management for digital subscriber line (DSL) transceivers	
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G.998.1	01-2005	ATM-based multi-pair bonding	Pre-published.
G.998.2	01-2005	Ethernet-based multi-pair bonding	Pre-published.
G.998.3	01-2005	Multi-pair bonding using time-division inverse multiplexing	Pre-published.
G.1000	11-2001	Communications Quality of Service: A framework and definitions	
G.1010	11-2001	End-user multimedia QoS categories	
G.1020	11-2003	Performance parameter definitions for quality of speech and other voiceband applications utilizing IP networks	
G.1020 (2003) Amendement 1	05-2004	New Annex A – VoIP gateway-specific reference points and performance parameters	
G.7041/Y.1303	12-2003	Generic framing procedure (GFP)	
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G.7043/Y.1343	07-2004	Virtual concatenation of plesiochronous digital hierarchy (PDH) signals	
G.7043/Y.1343 (2004) Amendment 1	01-2005		
G.7710/Y.1701	11-2001	Common equipment management function requirements	
G.7712/Y.1703	03-2003	Architecture and specification of data communication network	
G.7713/Y.1704	12-2001	Distributed Call and Connection Management (DCM)	
G.7713/Y.1704 (2001) Amendment 1	06-2004		
G.7713.1/Y.1704. 1	03-2003	Distributed Call and Connection Management (DCM) based on PNNI	
G.7713.2/Y.1704. 2	03-2003	Distributed Call and Connection Management: Signalling mechanism using GMPLS RSVP-TE	
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G.7714.1/Y.1705. 1	04-2003	Protocol for automatic discovery in SDH and OTN networks	
G.7715/Y.1706	06-2002	Architecture and requirements for routing in the automatically switched optical networks	
G.7715.1/Y.1706. 1	02-2004	ASON routing architecture and requirements for link state protocols	
G.7718/Y.1709	02-2005	Framework for ASON management	Pre-published.
G.8010/Y.1306	02-2004	Architecture of Ethernet layer networks	
G.8011/Y.1307	08-2004	Ethernet over Transport – Ethernet services framework	Available only in MS Word.
G.8011.1/Y.1307. 1	08-2004	Ethernet private line service	
G.8012/Y.1308	08-2004	Ethernet UNI and Ethernet NNI	
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G.8040/Y.1340	06-2004	GFP frame mapping into plesiochronous digital hierarchy (PDH)	
G.8040/Y.1340 (2004) Corrigendum 1	01-2005		

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G.8080/Y.1304	11-2001	Architecture for the automatically switched optical network (ASON)	
G.8080/Y.1304 (2001) Amendment 1	03-2003		
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G.8081/Y.1353	06-2004	Terms and definitions for Automatically Switched Optical Networks (ASON)	
G.8110/Y.1370	01-2005	MPLS layer network architecture	Pre-published.
G.8201	09-2003	Error performance parameters and objectives for multi-operator international paths within the Optical Transport Network (OTN)	
G.8251	11-2001	The control of jitter and wander within the optical transport network (OTN)	
G.8251 (2001) Corrigendum 1	06-2002		
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G.9954	02-2005	Phoneline networking transceivers – Enhanced physical, media access, and link layer specifications	Pre-published.
G.100 Series Supplement 29	03-1993	<a name="G1-5">Planning of mixed analogue-digital circuits (chains, connections)</a>	
G.100 Series Supplement 31	03-1993	<a name="G8">Principles of determining an impedance strategy for the local network</a>	
G.100 Series Supplement 32	03-1993	Transmission aspects of digital mobile radio systems	
G Suppl. 4	12-1972	<a name="G1-2">Certain methods of avoiding the transmission of excessive noise between interconnected systems</a>	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
G.Sup5	10-1984	<a name="G2-4">Measurement of the load of telephone circuits under field conditions</a>	Available only in PDF.
G Suppl. 7	12-1972	<a name="G7-1">Loss-frequency response of channel-translating equipment used in some countries for international circuits</a>	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
G Suppl. 8	12-1972	<a name="G7-4">Method proposed by the Belgian telephone administration for interconnection between coaxial and symmetric pair systems</a>	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
G.Sup17	10-1984	Group-delay distortion performance of terminal equipment	Available only in PDF.
G.Sup19	10-1984	<a name="G1-2">Digital crosstalk measurement (method used by the Administrations of France, the Netherlands and Spain)</a>	Available only in PDF.

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G.Sup22	10-1984	<a name="G8-4">Mathematical models of multiplex signals</a>	Available only in PDF.
G.Sup26	10-1984	Estimating the signal load margin of FDM wideband amplifier equipment and transmission systems	Available only in PDF.
G.Sup27	10-1984	<a name="G1-2">Interference from external sources</a>	Available only in PDF.
G.Sup28	10-1984	<a name="G1-4">Application of transmultiplexers, FDM codecs, data-in-voice (DIV) systems and data-over-voice (DOV) systems during the transition from an analogue to a digital network</a>	Available only in PDF.
G Suppl. 32	11-1988	Transfer of alarm information on 60-channel transmultiplexing equipment	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
G.Sup34	11-1988	<a name="G11">Temperature in underground containers for the installation of repeaters</a>	Available only in PDF.
G.Sup35	11-1988	Guidelines concerning the measurement of wander	Available only in PDF.
G.Sup36	11-1988	Jitter and wander accumulation in digital networks	Available only in PDF.
G.Sup37	10-1998	ITU-T Recommendation G.763 digital circuit multiplication equipment (DCME) tutorial and dimensioning	
G.Sup38	10-1998	Variable bit rate calculations for the ITU-T Recommendation G.767 Digital Circuit Multiplication Equipment (DCME)	
G.Sup39	10-2003	Optical system design and engineering considerations	

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Series H: Audiovisual and multimedia systems

Number	Approval Date	Recommendation Title	Status
		Audiovisual and multimedia systems	
H.100	11-1988	Visual telephone systems	
H.110	11-1988	Hypothetical reference connections for videoconferencing using primary digital group transmission	
H.120	03-1993	Codecs for videoconferencing using primary digital group transmission	
H.130	11-1988	Frame structures for use in the international interconnection of digital codecs for videoconferencing or visual telephony	
H.140	11-1988	A multipoint international videoconference system	
H.200	03-1993	Framework for Recommendations for audiovisual services	
H.221	03-2004	Frame structure for a 64 to 1920 kbit/s channel in audiovisual teleservices	
H.222.0	02-2000	Information technology – Generic coding of moving pictures and associated audio information: systems	
H.222.0 (2000) Technical Cor.1	03-2001		
H.222.0 (2000) Technical Cor.2	03-2002		
H.222.0 (2000) Amendment 1	12-2002	Carriage of metadata over ITU-T Rec. H.222.0   ISO/IEC 13818-1 streams	
H.222.0 (2000) Amend.1/Cor.1	06-2003		Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
H.222.0 Amendment 2	06-2003	Support of IPMP on MPEG-2 systems	
H.222.0 (2000) Amendment 2 Erratum 1	02-2004		
H.222.0 (2000) Amendment 3	03-2004	Transport of AVC video data over ITU-T Rec. H.222.0   ISO/IEC 13818-1 streams	
H.222.0 (2000) Corrigendum 3	01-2005		
H.222.0 (2000) Amendment 4	01-2005	ISAN and V-ISAN use in the content labelling descriptor	Pre-published.
H.222.0 (2000) Amendment 5	01-2005	New audio profile and level signalling and change to audio_type table entry	Pre-published.
H.222.1	03-1996	Multimedia multiplex and synchronization for audiovisual communication in ATM environments	
H.223	07-2001	Multiplexing protocol for low bit rate multimedia communication	

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H.224 H.225.0 H.226 H.230	01-2005 07-2003 09-1998	A real time control protocol for simplex applications using the H.221 LSD/HSD/MLP channels  Call signalling protocols and media stream packetization for packet-	Pre-published.
H.226 H.230			
H.230	09-1998	based multimedia communication systems	
		Channel aggregation protocol for multilink operation on circuit-switched networks	
	03-2004	Frame-synchronous control and indication signals for audiovisual systems	
H.231	07-1997	Multipoint control units for audiovisual systems using digital channels up to 1920 kbit/s	
H.233	11-2002	Confidentiality system for audiovisual services	
H.234	11-2002	Encryption key management and authentication system for audiovisual services	
H.235	08-2003	Security and encryption for H-series (H.323 and other H.245-based) multimedia terminals	
H.235 (2003) Amendment 1	04-2004		
H.235 (2003) Corrigendum 1	01-2005		Pre-published.
H.235 Annex G	01-2005	Usage of the MIKEY key management protocol for the secure real time transport protocol (SRTP) within H.235	Pre-published.
H.239	07-2003	Role management and additional media channels for H.300-series terminals	
H.241	07-2003	Extended video procedures and control signals for H.300-series terminals	
H.241 (2003) Corrigendum 1	03-2004		Pre-published.
H.241 (2003) Amendment 1	01-2005	Signalling of the H.264 level 1b	Pre-published.
H.242	03-2004	System for establishing communication between audiovisual terminals using digital channels up to 2 Mbit/s	
H.243	02-2000	Procedures for establishing communication between three or more audiovisual terminals using digital channels up to 1920 kbit/s	
H.243 (2000) Corrigendum 1	11-2000		
H.244	07-1995	Synchronized aggregation of multiple 64 or 56 kbit/s channels	
	01-2005	Control protocol for multimedia communication	Available only in MS Word.
H.245			
H.245 H.246	02-1998	Interworking of H-series multimedia terminals with H-series multimedia terminals and voice/voiceband terminals on GSTN and ISDN	
	02-1998 07-2003		
H.246		terminals and voice/voiceband terminals on GSTN and ISDN	
H.246 H.246 Annex C	07-2003	terminals and voice/voiceband terminals on GSTN and ISDN  Annex C: ISDN User Part function – H.225.0 interworking	

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H.247	09-1998	Multipoint extension for broadband audiovisual communication systems and terminals	
H.248.1	05-2002	Gateway control protocol: Version 2	
H.248.1 V2 (2002) Corrigendum 1	03-2004		
H.248.2	01-2005	Gateway control protocol: Facsimile, text conversation and call discrimination packages	Pre-published.
H.248.3	11-2000	Gateway control protocol: User interface elements and actions packages	
H.248.3 (2000) Corrigendum 1	03-2004		
H.248.4	11-2000	Gateway control protocol: Transport over Stream Control Transmission Protocol (SCTP)	
H.248.4 (2000) Corrigendum 1	03-2004		
H.248.5	11-2000	Gateway control protocol: Transport over ATM	
H.248.6	11-2000	Gateway control protocol: Dynamic Tone Definition package	
H.248.7	03-2004	Gateway control protocol: Generic Announcement package	
H.248.8	03-2002	Gateway control protocol: Error code and service change reason description	
H.248.8 (2002) Amendment 1	03-2004	New error code 458 (Unexpected Event/RequestID)	
H.248.9	01-2005	Gateway control protocol: Advanced media server packages	Pre-published.
H.248.10	07-2001	Gateway control protocol: Media gateway resource congestion handling package	
H.248.11	11-2002	Gateway control protocol: Media gateway overload control package	
H.248.12	07-2001	Gateway control protocol: H.248.1 packages for H.323 and H.324 interworking	
H.248.12 (2001) Amendment 1	11-2002	New Annex A: Extended H.324, H.245 command and H.245 indication packages	
H.248.13	03-2002	Gateway control protocol: Quality Alert Ceasing package	
H.248.14	03-2002	Gateway control protocol: Inactivity timer package	
H.248.15	03-2002	Gateway control protocol: SDP H.248 package attribute	
H.248.16	11-2002	Gateway control protocol: Enhanced digit collection packages and procedures	
H.248.16 (2002) Corrigendum 1	03-2004		
	03-2004	Gateway control protocol: Line test packages	
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H.248.19	03-2004	Gateway control protocol: Decomposed multipoint control unit, audio, video and data conferencing packages	
H.248.20	11-2002	Gateway control protocol: The use of local and remote descriptors with H.221 and H.223 multiplexing	
H.248.21	03-2004	Gateway control protocol: Semi-permanent connection handling package	
H.248.22	07-2003	Gateway control protocol: Shared Risk Group package	
H.248.22 (2003) Erratum 1	01-2004		
H.248.23	01-2005	Gateway control protocol: Enhanced Alerting packages	
H.248.24	07-2003	Gateway control protocol: Multi-frequency tone generation and detection packages	
H.248.25	07-2003	Gateway control protocol: Basic CAS packages	
H.248.25 (2003) Corrigendum 1	03-2004		
H.248.26	01-2005	Gateway control protocol: Enhanced analog lines packages	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
H.248.27	07-2003	Gateway control protocol: Supplemental tones packages	
H.248.28	03-2004	Gateway control protocol: International CAS packages	
H.248.29	01-2005	Gateway control protocol: International CAS compelled register signalling packages	
H.248.30	03-2004	Gateway control protocol: RTCP extended performance metrics packages	
H.248.31	04-2004	Gateway control protocol: Adaptive jitter buffer package	
H.248.32	01-2005	Gateway control protocol: Detailed congestion reporting package	Pre-published.
H.248.33	01-2005	Gateway control protocol: PCM frame spare bit package	
H.248.34	01-2005	Gateway control protocol: Stimulus analogue line package	
H.248.35	01-2005	Gateway control protocol: Coin-operated phone control package	
H.261	03-1993	Video codec for audiovisual services at p x 64 kbit/s	
H.262	02-2000	Information technology – Generic coding of moving pictures and associated audio information: Video	
H.262 (2000) Technical Cor. 1	11-2000		
H.262 (2000) Amendment 1	11-2000	Content description data	
H.262 (2000) Amendment 1 Erratum 1	04-2002		
H.263	01-2005	Video coding for low bit rate communication	Pre-published.

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H.263 App. III	06-2001	Examples for H.263 encoder/decoder implementations	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
H.264	03-2005	Advanced video coding for generic audiovisual services	Pre-published.
H.264.1	03-2005	Conformance specification for H.264 advanced video coding	Pre-published.
H.264.2	03-2005	Reference software for H.264 advanced video coding	Pre-published.
H.281	11-1994	A far end camera control protocol for videoconferences using H.224	
H.282	05-1999	Remote device control protocol for multimedia applications	
H.283	05-1999	Remote device control logical channel transport	
H.310	09-1998	Broadband audiovisual communication systems and terminals	
H.310 (1998) Corrigendum 1	01-2005		Pre-published.
H.320	03-2004	Narrow-band visual telephone systems and terminal equipment	
H.321	02-1998	Adaptation of H.320 visual telephone terminals to B-ISDN environments	
H.321 (1998) Corrigendum 1	01-2005		Pre-published.
H.322	03-1996	Visual telephone systems and terminal equipment for local area networks which provide a guaranteed quality of service	
H.323	07-2003	Packet-based multimedia communications systems	
H.323 (2003) Amendment 1	01-2005	Revised Annex D $-$ Real-time facsimile over H.323 systems: Transport of facsimile signals using RTP $$	Pre-published.
H.323 (2003) Amendment 2	01-2005	New Annex M4 – Tunnelling of narrowband signalling syntax (NSS) for H.323	Pre-published.
H.324	03-2002	Terminal for low bit-rate multimedia communication	
H.324 (2002) Corrigendum 1	11-2002		
H.324 (2002) Amendment 1	01-2005		Pre-published.
H.331	03-1993	Broadcasting type audiovisual multipoint systems and terminal equipment	
H.332	09-1998	H.323 extended for loosely coupled conferences	
H.341	05-1999	Multimedia management information base	Available only in MS Word.
H.350	08-2003	Directory services architecture for multimedia conferencing	Available only in MS Word.
H.350.1	08-2003	Directory services architecture for H.323	Available only in MS Word.
H.350.2	08-2003	Directory services architecture for H.235	Available only in MS Word.

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H.350.3	08-2003	Directory services architecture for H.320	Available only in MS Word.
H.350.4	08-2003	Directory services architecture for SIP	
H.350.5	08-2003	Directory services architecture for non-standard protocols	Available only in MS Word.
H.350.6	03-2004	Directory services architecture for call forwarding and preferences	
H.360	03-2004	An architecture for end-to-end QoS control and signalling	
H.450.1	02-1998	Generic functional protocol for the support of supplementary services in H.323	
H.450.2	02-1998	Call transfer supplementary service for H.323	
H.450.3	02-1998	Call diversion supplementary service for H.323	
H.450.4	05-1999	Call hold supplementary service for H.323	
H.450.5	05-1999	Call park and call pickup supplementary services for H.323	
H.450.5 Erratum 1	05-2000		
H.450.5 Erratum 2	04-2002		
H.450.6	05-1999	Call waiting supplementary service for H.323	
H.450.7	05-1999	Message waiting indication supplementary service for H.323	
H.450.8	02-2000	Name identification supplementary service for H.323	
H.450.9	11-2000	Call completion supplementary services for H.323	
H.450.10	03-2001	Call offering supplementary services for H.323	
H.450.11	03-2001	Call intrusion supplementary service for H.323	
H.450.12	07-2001	Common Information Additional Network Feature for H.323	
H.460.1	03-2002	Guidelines for the Use of the Generic Extensible Framework	
H.460.2	07-2001	Number Portability interworking between H.323 and SCN networks	
H.460.3	11-2002	Circuit maps within H.323 systems	
H.460.4	11-2002	Call priority designation for H.323 calls	
H.460.5	11-2002	H.225.0 transport of multiple Q.931 information elements of the same type	•
H.460.6	11-2002	Extended Fast Connect feature	
H.460.7	11-2002	Digit maps within H.323 systems	
H.460.8	11-2002	Querying for alternate routes within H.323 systems	
H.460.9	11-2002	Support for online QoS-monitoring reporting within H.323 systems	
H.460.9 (2002) Amendment 1	03-2004	New Annex B – Extended performance metrics	

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H.460.10	03-2004	Call party category within H.323 systems	
H.460.11	03-2004	Delayed call establishment within H.323 systems	
H.460.12	03-2004	Glare control indicator within H.323 systems	
H.460.13	03-2004	Called user release control within H.323 systems	
H.460.14	03-2004	Support for Multi-Level Precedence and Preemption (MLPP) within H.323 systems	
H.460.15	03-2004	Call signalling transport channel suspension and redirection within H.323 systems	
H.460.16	01-2005	Multiple message release sequence capability	Pre-published.
H.501	03-2002	Protocol for mobility management and intra/inter-domain communication in multimedia systems	
H.510	03-2002	Mobility for H.323 multimedia systems and services	
H.530	03-2002	Symmetric security procedures for H.323 mobility in H.510	
H.530 Corrigendum 1	07-2003		
H.610	07-2003	Full service VDSL – System architecture and customer premises equipment	
H.611	07-2003	Full-Service VDSL – Operations, Administration Maintenance & Provision aspects	
H.Sup1	05-1999	Application profile – Sign language and lip-reading real-time conversation using low bit rate video communication	
H.Sup3	05-2003	Operator requirements for full-service VDSL in ITU-T Recommendations H.610 and H.611	

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Series I: Integrated services digital network

Number	Approval Date	Recommendation Title	Status
		Integrated services digital network	
I.112	03-1993	Vocabulary of terms for ISDNs	
I.112 Appendix I	02-2002	General telecommunication terminology and definitions	
I.113	06-1997	Vocabulary of terms for broadband aspects of ISDN	
I.114	03-1993	Vocabulary of terms for universal personal telecommunication	
I.120	03-1993	Integrated services digital networks (ISDNs)	
I.121	04-1991	Broadband aspects of ISDN	
I.122	03-1993	Framework for frame mode bearer services	
I.130	11-1988	Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN	
I.140	03-1993	Attribute technique for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN	
I.141	11-1988	ISDN network charging capabilities attributes	
I.150	02-1999	B-ISDN asynchronous transfer mode functional characteristics	
1.200	11-1988	Guidance to the I.200-series of Recommendations	
I.210	03-1993	Principles of telecommunication services supported by an ISDN and the means to describe them	
I.211	03-1993	B-ISDN service aspects	
1.220	11-1988	Common dynamic description of basic telecommunication services	
I.221	03-1993	Common specific characteristics of services	
1.230	11-1988	Definition of bearer service categories	
		Circuit-mode bearer service categories	
1.231.1	11-1988	Circuit-mode 64 kbit/s unrestricted, 8 kHz structured bearer service	
1.231.2	11-1988	Circuit-mode 64 kbit/s, 8 kHz structured bearer service usable for speech information transfer	
1.231.3	11-1988	Circuit-mode 64 kbit/s, 8 kHz structured bearer service usable for 3.1 kHz audio information transfer	
I.231.4	11-1988	Circuit-mode, alternate speech / 64 kbit/s unrestricted, 8 kHz structured bearer service	
I.231.5	11-1988	Circuit-mode 2 x 64 kbit/s unrestricted, 8 kHz structured bearer service	
I.231.6	07-1996	Circuit-mode 384 kbit/s unrestricted, 8 kHz structured bearer service	
I.231.7	07-1996	Circuit-mode 1536 kbit/s unrestricted, 8 kHz structured bearer service	

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I.231.8	07-1996	Circuit-mode 1920 kbit/s unrestricted, 8 kHz structured bearer service	
I.231.9	03-1993	Circuit-mode 64 kbit/s 8 kHz structured multi-use bearer service	
I.231.10	08-1992	Circuit-mode multiple-rate unrestricted 8 kHz structured bearer service	
		Packet-mode bearer services categories	
1.232.1	11-1988	Virtual call and permanent virtual circuit bearer service category	
1.232.2	11-1988	Connectionless bearer service category	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
1.232.3	03-1993	User signalling bearer service category (USBS)	
		Frame mode bearer services	
1.233.1	10-1991	ISDN frame relaying bearer service	
I.233.1 Annex F	07-1996	Frame relay multicast	
1.233.2	10-1991	ISDN frame switching bearer service	
1.240	11-1988	Definition of teleservices	
		Teleservices supported by an ISDN	
I.241.1	11-1988	Telephony	
1.241.2	11-1988	Teletex	
1.241.3	11-1988	Telefax 4	
1.241.4	11-1988	Mixed mode	
1.241.5	11-1988	Videotex	
1.241.6	11-1988	Telex	
1.241.7	03-1993	Telephony 7 kHz teleservice	
1.241.8	10-1995	Teleaction stage one service description	
1.250	11-1988	Definition of supplementary services	
		Number identification supplementary services	
l.251.1	08-1992	Direct-dialling-In	Available only in PDF.
1.251.2	08-1992	Multiple Subscriber Number	
1.251.3	08-1992	Calling Line Identification Presentation	
1.251.4	08-1992	Calling Line Identification Restriction	
1.251.5	02-1995	Connected Line Identification Presentation (COLP)	
I.251.6	02-1995	Connected Line Identification Restriction (COLR)	

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1.251.7	08-1992	Malicious call Identification	
1.251.8	08-1992	Sub-addressing supplementary service	
1.251.9	07-1996	Calling name identification presentation	
1.251.10	07-1996	Calling name identification restriction	
		Call offering supplementary services	
1.252.1	11-1988	Call Transfer	
1.252.2	08-1992	Call Forwarding Busy	
1.252.3	08-1992	Call Forwarding No Reply	
1.252.4	08-1992	Call Forwarding Unconditional	
1.252.5	08-1992	Call Deflection	
1.252.6	11-1988	Line Hunting (LH)	
1.252.7	05-1997	Explicit call transfer	
		Call completion supplementary services	
1.253.1	11-1988	Call waiting (CW) supplementary service	
1.253.2	08-1992	Call Hold	
1.253.3	07-1996	Completion of calls to busy subscribers	
1.253.4	07-1996	Completion of calls on no reply	
		Multiparty supplementary services	
1.254.1	11-1988	Conference calling (CONF)	
1.254.2	08-1992	Three-Party Supplementary Service	
1.254.5	05-1997	Meet-me conference	
		Community of interest supplementary services	
1.255.1	08-1992	Closed User Group	
1.255.2	07-1996	Support of Private Numbering Plans	
1.255.3	07-1990	Multi-level precedence and preemption service (MLPP)	
1.255.4	07-1990	Priority service	
1.255.5	08-1992	Outgoing call barring	
		Charging supplementary services	
I.256.1	11-1988	Credit card calling (CRED)	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 

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I.256.2a	03-1993	Advice of charge: charging information at call set-up time (AOC-S)	
I.256.2b	03-1993	Advice of charge: charging information during the call (AOC-D)	
I.256.2c	03-1993	Advice of charge: charging information at the end of the call (AOC-E)	
1.256.3	08-1992	Reverse charging	
		Additional information transfer supplementary services	
I.257.1	10-1995	User-to-User Signalling (UUS)	
		Mobility and modification supplementary services	
I.258.1	10-1995	Terminal portability (TP)	
1.258.2	02-1995	In-call modification (IM)	
		Screening supplementary services	
1.259.1	07-1996	Address screening (ADS)	
I.310	03-1993	ISDN – Network functional principles	
I.311	08-1996	B-ISDN general network aspects	
I.311 (1996) Amendment 1	03-2000		
I.312/Q.1201	10-1992	Principles of intelligent network architecture	
I.313	09-1997	B-ISDN network requirements	
1.320	11-1993	ISDN protocol reference model	
1.321	04-1991	B-ISDN protocol reference model and its application	
1.322	02-1999	Generic protocol reference model for telecommunication networks	
1.324	10-1991	ISDN network architecture	
1.325	03-1993	Reference configurations for ISDN connection types	
1.326	03-2003	Functional architecture of transport networks based on ATM	
1.327	03-1993	B-ISDN functional architecture	
I.328/Q.1202	09-1997	Intelligent network – Service plane architecture	
I.329/Q.1203	09-1997	Intelligent network – Global functional plane architecture	
1.330	11-1988	ISDN numbering and addressing principles	
E.164	02-2005	The international public telecommunication numbering plan Pre-published	
E.164 Supplement 1	03-1998	Alternatives for carrier selection and network identification	
E.164 Supplement 2	11-1998	Number Portability	

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E.164 Supplement 3	05-2004	Operational and administrative issues associated with national implementations of the ENUM functions
E.164 Supplement 4	05-2004	Operational and administrative issues associated with the implementation of ENUM for non-geographic country codes
1.333	03-1993	Terminal selection in ISDN
1.334	11-1988	Principles relating ISDN numbers/sub-addresses to the OSI reference model network layer addresses
1.340	11-1988	ISDN connection types
1.350	03-1993	General aspects of quality of service and network performance in digital networks, including ISDNs
G.820/I.351/Y.15 01	07-2004	Relationships among ISDN, IP-based network and physical layer performance Recommendations
1.352	03-1993	Network performance objectives for connection processing delays in an ISDN
1.353	08-1996	Reference events for defining ISDN and B-ISDN performance parameters
1.354	03-1993	Network performance objectives for packet-mode communication in an ISDN
1.355	10-2000	ISDN 64 kbit/s connection type availability performance
1.356	03-2000	B-ISDN ATM layer cell transfer performance
I.356 (2000) Amendment 1	02-2004	New Appendix V $-$ Support of Y.1541 QoS classes 0 and 2 in ATM-based networks
1.357	11-2000	B-ISDN semi-permanent connection availability
1.358	09-2003	Call processing performance for switched virtual channel connections (VCCs) in a B-ISDN
1.359	02-1999	Accuracy and dependability of ISDN 64 kbit/s circuit-mode connection types
I.361	02-1999	B-ISDN ATM layer specification
		B-ISDN ATM Adaptation Layer specification
1.363.1	08-1996	Type 1 AAL
1.363.2	11-2000	Type 2 AAL
1.363.3	08-1996	Type 3/4 AAL
1.363.5	08-1996	Type 5 AAL
1.364	02-1999	Support of the broadband connectionless data bearer service by the B-ISDN
		B-ISDN ATM adaptation layer sublayers
1.365.1	11-1993	Frame relaying service specific convergence sublayer (FR-SSCS)
1.365.2	11-1995	Service-specific coordination function to provide the connection-oriented network service

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1.365.3	11-1995	Service-specific coordination function to provide the connection-oriented transport service	
1.365.4	08-1996	Service-specific convergence sublayer for HDLC applications	
I.366.1	06-1998	Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2	
1.366.2	11-2000	AAL type 2 service specific convergence sublayer for narrow-band services	
I.366.2 (2000) Corrigendum 1	03-2002		
1.370	10-1991	Congestion management for the ISDN frame relaying bearer service	
I.371	03-2004	Traffic control and congestion control in B-ISDN	Pre-published.
1.372	03-1993	Frame relaying bearer service network-to-network interface requirements	
1.373	03-1993	Network capabilities to support universal personal telecommunication (UPT)	
		Network capabilities to support multimedia services	
1.375.1	06-1998	General aspects	
1.375.2	06-1998	Example of multimedia retrieval service class – Video-on-demand service using an ATM-based network	
1.375.3	03-2000	Example of multimedia distribution service class – Switched digital broadcasting	
1.376	03-1995	ISDN network capabilities for the support of the teleaction service	
1.377	10-2000	Network requirements to support charging and accounting in B-ISDN	
1.378	12-2002	Traffic control and congestion control at the ATM Adaptation Layer type 2	
I.378 (2002) Amendment 1	08-2003	New Appendix IV: Deriving AAL 2 traffic parameters from AAL 2 link characteristics	
I.381	03-2001	ATM adaptation layer (AAL) Performance	
I.410	11-1988	General aspects and principles relating to Recommendations on ISDN user-network interfaces	
I.411	03-1993	ISDN user-network interfaces – Reference configurations	
1.412	11-1988	ISDN user-network interfaces – Interface structures and access capabilities	
I.413	03-1993	B-ISDN user-network interface	
1.414	09-1997	Overview of Recommendations on layer 1 for ISDN and B-ISDN customer accesses	
1.420	11-1988	Basic user-network interface	
1.421	11-1988	Primary rate user-network interface	
1.430	11-1995	Basic user-network interface – Layer 1 specification	
I.431	03-1993	Primary rate user-network interface – Layer 1 specification	

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I.431 (1993) Amendment 1	06-1997	
		B-ISDN user-network interface – Physical layer specification
1.432.1	02-1999	General characteristics
1.432.2	02-1999	155 520 kbit/s and 622 080 kbit/s operation
1.432.3	02-1999	1544 kbit/s and 2048 kbit/s operation
1.432.4	02-1999	51 840 kbit/s operation
1.432.5	06-1997	25 600 kbit/s operation
Q.920	03-1993	ISDN user-network interface data link layer – General aspects
Q.920 (1993) Amendment 1	06-2000	
Q.921	09-1997	ISDN user-network interface – Data link layer specification
Q.921 (1997) Amendment 1	06-2000	
Q.930	03-1993	ISDN user-network interface layer 3 – General aspects
Q.931	05-1998	ISDN user-network interface layer 3 specification for basic call control
Q.931 (1998) Amendment 1	12-2002	Extensions for the support of digital multiplexing equipment
Q.931 (1998) Erratum 1	02-2003	
1.460	02-1999	Multiplexing, rate adaption and support of existing interfaces
X.30	03-1993	Support of X.21, X.21 bis and X.20 bis based Data Terminal Equipments (DTEs) by an Integrated Services Digital Network (ISDN)
X.31	11-1995	Support of packet mode terminal equipment by an ISDN
V.110	02-2000	Support by an ISDN of data terminal equipments with V-series type interfaces
1.464	02-1999	Multiplexing, rate adaption and support of existing interfaces for restricted 64 kbit/s transfer capability
V.120	10-1996	Support by an ISDN of data terminal equipment with V-series type interfaces with provision for statistical multiplexing
V.120 (1996) Corrigendum 1	05-1999	
1.470	11-1988	Relationship of terminal functions to ISDN
1.480	03-2000	1+1 protection switching for cell-based physical layer
1.500	03-1993	General structure of the ISDN interworking Recommendations
I.501	03-1993	Service interworking
I.510	03-1993	Definitions and general principles for ISDN interworking

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I.511	11-1988	ISDN-to-ISDN layer 1 internetwork interface
I.515	03-1993	Parameter exchange for ISDN interworking
1.520	03-1993	General arrangements for network interworking between ISDNs
1.525	08-1996	Interworking between networks operating at bit rates less than 64 kbit/s with 64 kbit/s-based ISDN and B-ISDN
1.530	03-1993	Network interworking between an ISDN and a public switched telephone network (PSTN)
X.321	10-1996	General arrangements for interworking between Circuit-Switched Public Data Networks (CSPDNs) and Integrated Services Digital Networks (ISDNs) for the provision of data transmission services
X.325	10-1996	General arrangements for interworking between Packet-Switched Public Data Networks (PSPDNs) and Integrated Services Digital Networks (ISDNs) for the provision of data transmission services
1.555	09-1997	Frame Relaying Bearer Service interworking
U.202	03-1993	Technical requirements to be met in providing the international telex service within an integrated services digital network
1.570	03-1993	Public/private ISDN interworking
I.571	08-1996	Connection of VSAT based private networks to the public ISDN
1.572	03-2000	VSAT interconnection with the PSTN
1.580	11-1995	General arrangements for interworking between B-ISDN and 64 kbit/s based ISDN
I.581	09-1997	General arrangements for B-ISDN interworking
1.601	11-1988	General maintenance principles of ISDN subscriber access and subscriber installation
I.610	02-1999	B-ISDN operation and maintenance principles and functions
I.610 (1999) Corrigendum 1	03-2000	
I.610 (1999) Amendment 1	03-2000	
1.630	02-1999	ATM protection switching
I.630 (1999) Corrigendum 1	03-2000	
I.630 (1999) Amendment 1	03-2000	
I.731	10-2000	Types and general characteristics of ATM equipment
1.732	10-2000	Functional characteristics of ATM equipment
I.741	07-1999	Interworking and interconnection between ATM and switched telephone networks for the transmission of speech, voiceband data and audio signals
I.751	03-1996	Asynchronous transfer mode management of the network element view

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I.761	03-2000	Inverse multiplexing for ATM (IMA)
1.762	03-2000	ATM over fractional physical links
I.Sup1	03-1998	Generic service descriptions for ten supplementary services defined in I.250-Series Recommendations

Recommendation count: 220

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Series J: Cable networks and transmission of television, sound programme and other multimedia signals

Number	Approval Date	Recommendation Title	Status
		Cable networks and transmission of television, sound programme and other multimedia signals	
J.2	09-1999	Guidelines on the use of some ITU-T Recommendations in the J series	
J.11	11-1988	Hypothetical reference circuits for sound-programme transmissions	
J.12	11-1988	Types of sound-programme circuits established over the international telephone network	
J.13	11-1988	Definitions for international sound-programme circuits	
J.14	11-1988	Relative levels and impedances on an international sound-programme connection	
J.15	11-1988	Lining-up and monitoring an international sound-programme connection	
J.16	11-1988	Measurement of weighted noise in sound-programme circuits	
J.17	11-1988	Pre-emphasis used on sound-programme circuits	
J.18	11-1988	Crosstalk in sound-programme circuits set up on carrier systems	
J.19	11-1988	A conventional test signal simulating sound-programme signals for measuring interference in other channels	
J.21	08-1994	Performance characteristics of 15 kHz-type sound-programme circuits – Circuits for high quality monophonic and stereophonic transmissions	
J.23	11-1988	Performance characteristics of 7 kHz type (narrow bandwidth) sound-programme circuits	
J.24	02-1982	Modulation of signals carried by sound-programme circuits by interfering signals from power supply sources	
J.25	05-1986	Estimation of transmission performance of sound-programme circuits shorter or longer than the hypothetical reference circuit	
J.26	06-1990	Test signals to be used on international sound-programme connections	
J.27	06-1990	Signals for the alignment of international sound-programme connections	
J.41	11-1988	Characteristics of equipment for the coding of analogue high quality sound programme signals for transmission on 384 kbit/s channels	
J.42	11-1988	Characteristics of equipment for the coding of analogue medium quality sound-programme signals for transmission on 384-kbit/s channels	
J.51	08-1994	General principles and user requirements for the digital transmission of high quality sound programmes	
J.52	07-1996	Digital transmission of high-quality sound-programme signals using one, two or three 64 kbit/s channels per mono signal (and up to six per stereo signal)	
J.52 (1996) Amendment 1	09-1999	New Appendix II – Extracts from EBU specification of an ISDN Codec capable of delivering high-quality audio	

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J.53	05-2000	Sampling frequencies to be used for the digital transmission of studio- quality and high-quality sound-programme signals	
J.54	05-1986	Transmission of analogue high-quality sound-programme signals on mixed analogue-and-digital circuits using 384 kbit/s channels	
J.55	06-1990	Digital transmission of high-quality sound-programme signals on distribution circuits using 480 kbit/s (496 kbit/s) per audio channel	
J.57	06-1990	Transmission of digital studio quality sound signals over H1 channels	
J.61	06-1990	Transmission performance of television circuits designed for use in international connections	Available only in PDF.
J.62	02-1978	Single value of the signal-to-noise ratio for all television systems	
J.63	06-1990	Insertion of test signals in the field-blanking interval of monochrome and colour television signals	
J.64	02-1986	Definitions of parameters for simplified automatic measurement of television insertion test signals	
J.65	02-1978	Standard test signal for conventional loading of a television channel	
J.66	02-1978	Transmission of one sound programme associated with analogue television signal by means of time division multiplex in the line synchronizing pulse	
J.67	03-2001	Test signals and measurement techniques for transmission circuits carrying MAC/packet signals	
J.68	02-1982	Hypothetical reference chain for television transmissions over very long distances	
J.80	09-1993	Transmission of component-coded digital television signals for contribution-quality applications at bit rates near 140 Mbit/s	
J.81	09-1993	Transmission of component-coded digital television signals for contribution-quality applications at the third hierarchical level of ITU-T Recommendation G.702	
J.81 (1993) Amendment 1	10-1995	Appendix II to Annex A to Recommendation J.81 – Guidelines for implementation of a complete television codec	
J.81 (1993) Corrigendum 1	10-1996		
J.81 (1993) Amendment 2	03-1998	Appendix IV to Annex A – Results of 34 Mbit/s codec interworking tests (February 1996)	
J.82	07-1996	Transport of MPEG-2 constant bit rate television signals in B-ISDN	
J.83	04-1997	Digital multi-programme systems for television, sound and data services for cable distribution	
J.83 (1997) Erratum 1	07-1998		
J.84	03-2001	Distribution of digital multi-programme signals for television, sound and data services through SMATV networks	
J.85	06-1990	Digital television transmission over long distances – General principles	
J.86	06-1990	Mixed analogue-and-digital transmission of analogue composite television signals over long distances	
J.87	03-2001	Use of hybrid cable television links for the secondary distribution of television into the user's premises	

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J.88	09-1999	Transmission of enhanced definition television signals over digital links	
J.89	09-1999	Transport Mechanism for component-coded digital television signals using MPEG-2 4:2:2 P@ML including all service elements for contribution and primary distribution	
J.90	05-2000	Electronic programme guides for delivery by digital cable television and similar methods – Reference operating scenario and requirements	
J.91	08-1994	Technical methods for ensuring privacy in long-distance international television transmission	
J.92	04-1997	Recommended operating guidelines for point-to-point transmission of television programmes	
J.93	03-1998	Requirements for conditional access in the secondary distribution of digital television on cable television systems	
J.94	11-1998	Service information for digital broadcasting in cable television systems	
J.94 (1998) Amendment 1	10-2000	Annex B – Service information delivered out of band for digital cable television systems	
J.94 (1998) Amendment 2	03-2001	Revised Annex C – Service information for digital multi-programme System C	
J.95	09-1999	Copy protection of intellectual property for content delivered on cable television systems	
J.96	07-2002	Technical method for ensuring privacy in long-distance international MPEG-2 television transmission conforming to ITU-T Recommendation J.89	
J.97	07-2002	Metadata on cable networks	
J.98	05-2003	Metadata requirements for video-on-demand in cable networks	
J.100	06-1990	Tolerances for transmission time differences between the vision and sound components of a television signal	
J.101	06-1990	Measurement methods and test procedures for teletext signals	
J.110	04-1997	Basic principles for a worldwide common family of systems for the provision of interactive television services	
J.111	03-1998	Network independent protocols for interactive systems	
J.112	03-1998	Transmission systems for interactive cable television services	
J.112 Annex A	03-2001	Digital Video Broadcasting: DVB interaction channel for Cable TV (CATV) distribution systems	
J.112 Annex B	03-2004	Data-over-cable service interface specifications: Radio-frequency interface specification	Pre-published.
J.112 Annex C	02-2002	Data-over-cable service interface specifications: Radio-frequency interface specification using QAM technique	
J.113	03-1998	Digital video broadcasting interaction channel through the PSTN/ISDN	
J.114	09-1999	Interaction channel using digital enhanced cordless telecommunications	
J.115	09-1999	Interaction channel using the global system for mobile communications	
J.116	05-2000	Interaction channel for local multipoint distribution systems	

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J.117	09-1999	Home digital network interface specification	
J.118	05-2000	Access systems for interactive services on SMATV/MATV networks	
J.120	05-2000	Distribution of sound and television programs over the IP network	Available only in MS Word.
J.121	02-2002	Quality control protocol for webcasting	
J.122	12-2002	Second-generation transmission systems for interactive cable television services – IP cable modems	
J.123	07-2002	Multiplexing format for webcasting on the TCP/IP network	
J.124	03-2004	Multiplexing format for multimedia webcasting over TCP/IP networks	
J.125	04-2004	Link privacy for cable modem implementations	
J.126	04-2004	Embedded Cable Modem device specification	
J.127	06-2004	Transmission protocol for multimedia webcasting over TCP/IP networks	
J.131	03-1998	Transport of MPEG-2 signals in PDH networks	
J.132	03-1998	Transport of MPEG-2 signals in SDH networks	
J.133	07-2002	Measurement of MPEG-2 transport streams in networks	
J.140	03-1998	Subjective picture quality assessment for digital cable television systems	
J.141	09-1999	Performance indicators for data services delivered over digital cable television systems	
J.142	05-2000	Methods for the measurement of parameters in the transmission of digital cable television signals	
J.143	05-2000	User requirements for objective perceptual video quality measurements in digital cable television	
J.144	03-2004	Objective perceptual video quality measurement techniques for digital cable television in the presence of a full reference	Pre-published.
J.145	03-2001	Measurement and control of the quality of service for sound transmission over contribution and distribution networks	
J.146	07-2002	Loop latency issues in contribution circuits for conversational TV programmes	
J.147	07-2002	Objective picture quality measurement method by use of in-service test signals	
J.148	05-2003	Requirements for an objective perceptual multimedia quality model	
J.149	03-2004	Method for specifying accuracy and cross-calibration of Video Quality Metrics (VQM)	Pre-published.
J.150	03-1998	Operational functionalities for the delivery of digital multiprogramme television, sound and data services through multichannel, multipoint distribution systems (MMDS)	
J.150 (1998) Amendment 1	09-1999	Additions to Recommendation J.150 to also encompass local multipoint distribution systems (LMDS)	
J.150 (1998) Amendment 2	03-2001		

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J.151	10-2000	RF remodulator interface for digital television	
J.160	02-2002	Architectural framework for the delivery of time-critical services over cable television networks using cable modems	
J.161	03-2001	Audio codec requirements for the provision of bidirectional audio service over cable television networks using cable modems	
J.162	03-2004	Network call signalling protocol for the delivery of time-critical services over cable television networks using cable modems	
J.163	03-2004	Dynamic quality of service for the provision of real-time services over cable television networks using cable modems	
J.164	03-2001	Event message requirements for the support of real-time services over cable television networks using cable modems	
J.165	05-2003	IPCablecom Internet signalling transport protocol (ISTP)	
J.166	03-2001	IPCablecom Management Information Base (MIB) framework	
J.167	03-2001	Media terminal adapter (MTA) device provisioning requirements for the delivery of real-time services over cable television networks using cable modems	
J.168	03-2001	IPCablecom Media Terminal Adapter (MTA) MIB requirements	
J.169	03-2001	IPCablecom network call signalling (NCS) MIB requirements	
J.170	02-2002	IPCablecom security specification	Pre-published.
J.171	02-2002	IPCablecom Trunking Gateway Control Protocol (TGCP)	
J.171 (2002) Amendment 1	05-2003	TGCP Profile 2	
J.172	02-2002	IPCablecom management event mechanism	
J.173	02-2002	IPCablecom embedded MTA primary line support	
J.174	02-2002	IPCablecom interdomain quality of service	
J.175	07-2002	Audio server protocol	
J.176	07-2002	IPCablecom management event mechanism MIB	
J.177	05-2003	IPCablecom CMS subscriber provisioning specification	
J.178	05-2003	IPCablecom CMS to CMS signalling	Pre-published.
J.179	04-2004	IPCablecom support for multimedia	
J.180	05-2000	User requirements for statistical multiplexing of several programmes on a transmission channel	
J.181	06-2004	Digital program insertion cueing message for cable television systems	
J.182	03-2001	Parameter sets for analogue interface specifications for the interconnection of set-top boxes and presentation devices in the home	
J.183	03-2001	Time-division multiplexing of multiple MPEG-2 transport streams over cable television systems	
J.184	03-2001	Digital broadband delivery system: Out-of-band transport	

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J.185	02-2002	Transmission equipment for transferring multi-channel television signals over optical access networks by FM conversion	
J.186	02-2002	Transmission equipment for multi-channel television signals over optical access networks by sub-carrier multiplexing (SCM)	
J.187	07-2002	Transport mechanism for component-coded digital high-definition television signals using MPEG-2 video coding including all service elements for contribution and primary distribution	
J.187 (2002) Corrigendum 1	04-2003		
J.188	07-2002	A framework for an efficient parallel video transmission system including codecs with functions of failure detection and picture quality evaluation	
J.189	07-2002	Seamless splicing for MPEG-2 bit streams	
J.189 (2002) Corrigendum 1	04-2003		
J.190	07-2002	Architecture of MediaHomeNet that supports cable-based services	
J.191	03-2004	IP feature package to enhance cable modems	
J.192	03-2004	A residential gateway to support the delivery of cable data services	Pre-published.
J.193	06-2004	Requirements for the next generation of set-top-boxes	
J.200	03-2001	Worldwide common core – Application environment for digital interactive television services	
J.200 (2001) Corrigendum 1	05-2004		
J.201	07-2004	Harmonization of declarative content format for interactive television applications	
J.201 (2004) Amendment 1	03-2005	Additionnal media types	Pre-published.
J.202	05-2003	Harmonization of procedural content formats for interactive TV applications	
J.240	06-2004	Framework for remote monitoring of transmitted picture signal-to-noise ratio using spread-spectrum and orthogonal transform	
J.241	04-2005	Quality of service ranking and measurement methods for digital video services delivered over broadband IP networks	Pre-published.
J.260	01-2005	Requirements for preferential telecommunications over IPCablecom networks	
J.280	03-2004	Digital Program Insertion: Splicing application programming interface	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
J.281	03-2005	Requirements for multichannel video signal transmission over IP-based fibre network	Pre-published.
J.600	06-2004	Transport of Large Screen Digital Imagery (LSDI) applications that employ MPEG-2 encoded HDTV signals	
J.Sup1	11-1998	Example of linking options between annexes of ITU-T Recommendation J.112 and annexes of ITU-T Recommendation J.83	

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J.Sup2	11-1998	Guidelines for the implementation of annex A of Recommendation J.112, "Transmission systems for interactive cable television services" – Example of digital video broadcasting (DVB) interaction channel for cable television distribution
J.Sup3	11-1998	Guidelines for the implementation of Recommendation J.111 "Network independent protocols" – Example of digital video broadcasting (DVB) systems for interactive services
J.Sup5	09-1999	Guidelines on the use of some ITU-T Recommendations in the J series

Recommendation count: 149

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Series K: Protection against interference

Number	Approval Date	Recommendation Title	Status
		Protection against interference	
K.5	11-1988	Joint use of poles for electricity distribution and for telecommunications	
K.6	11-1988	Precautions at crossings	
K.7	11-1988	Protection against acoustic shock	
K.8	11-1988	Separation in the soil between telecommunication cables and earthing system of power facilities	
K.9	11-1988	Protection of telecommunication staff and plant against a large earth potential due to a neighbouring electric traction line	
K.10	10-1996	Low frequency interference due to unbalance about earth of telecommunication equipment	
K.11	10-1993	Principles of protection against overvoltages and overcurrents	
K.12	02-2000	Characteristics of gas discharge tubes for the protection of telecommunications installations	
K.13	11-1988	Induced voltages in cables with plastic-insulated conductors	
K.14	11-1988	Provision of a metallic screen in plastic-sheathed cables	
K.18	11-1988	Calculation of voltage induced into telecommunication lines from radio station broadcasts and methods of reducing interference	
K.19	11-1988	Joint use of trenches and tunnels for telecommunication and power cables	
K.20	07-2003	Resistibility of telecommunication equipment installed in a telecommunications centre to overvoltages and overcurrents	
K.20 (2003) Erratum 1	01-2004	Correction to table 7/K.20	
K.20 (2003) Amendment 1	11-2004	New Appendix I – Floating transverse power induction and earth potentia rise test for ports connected to external symmetric pair cables	l
K.21	07-2003	Resistibility of telecommunication equipment installed in customer premises to overvoltages and overcurrents	
K.21 (2003) Erratum 1	01-2004	Correction to table 7/K.21	
K.23	11-1988	Types of induced noise and description of noise voltage parameters for ISDN basic user networks	
K.24	11-1988	Method for measuring radio-frequency induced noise on telecommunications pairs	
K.25	02-2000	Protection of optical fibre cables	
K.26	11-1988	Protection of telecommunication lines against harmful effects from electric power and electrified railway lines	
K.27	05-1996	Bonding configurations and earthing inside a telecommunication building	

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K.28	03-1993	Characteristics of semi-conductor arrester assemblies for the protection of telecommunications installations
K.29	01-1992	Coordinated protection schemes for telecommunication cables below ground
K.30	12-2004	Self-restoring overcurrent protectors
K.31	03-1993	Bonding configurations and earthing of telecommunication installations inside a subscriber's building
K.33	10-1996	Limits for people safety related to coupling into telecommunications system from a.c. electric power and a.c. electrified railway installations in fault conditions
K.34	07-2003	Classification of electromagnetic environmental conditions for telecommunication equipment – Basic EMC Recommendation
K.35	05-1996	Bonding configurations and earthing at remote electronic sites
K.36	05-1996	Selection of protective devices
K.37	02-1999	Low and high frequency EMC mitigation techniques for telecommunication installations and systems – Basic EMC Recommendation
K.38	10-1996	Radiated emission test procedure for physically large systems
K.39	10-1996	Risk assessment of damages to telecommunication sites due to lightning discharges
K.40	10-1996	Protection against LEMP in telecommunications centres
K.42	05-1998	Preparation of emission and immunity requirements for telecommunication equipment – General principles
K.43	07-2003	Immunity requirements for telecommunication equipment
K.43 (2003) Amendment 1	11-2004	
K.44	07-2003	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation
K.45	07-2003	Resistibility of telecommunication equipment installed in the access and trunk networks to overvoltages and overcurrents
K.46	07-2003	Protection of telecommunication lines using metallic symmetric conductors against lightning-induced surges
K.47	12-2000	Protection of telecommunication lines using metallic conductors against direct lightning discharges
K.48	07-2003	EMC requirements for each telecommunication equipment – Product family Recommendation
K.49	02-2000	Test condition and performance criteria for voice terminal subject to disturbance from digital mobile phone
K.50	02-2000	Safe limits of operating voltages and currents for telecommunication systems powered over the network
K.51	02-2000	Safety criteria for telecommunication equipment
K.52	12-2004	Guidance on complying with limits for human exposure to electromagnetic fields

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K.53	02-2000	Values of induced voltages on telecommunication installations to establish telecom and a.c. power and railway operators responsibilities
K.54	12-2004	Conducted immunity test method and level at fundamental power frequencies
K.55	08-2002	Overvoltage and overcurrent requirements for insulation displacement connectors (IDC) terminations
K.56	07-2003	Protection of radio base stations against lightning discharges
K.57	09-2003	Protection measures for radio base stations sited on power line towers
K.58	07-2003	EMC, resistibility and safety requirements and procedures for co-located telecommunication installations
K.59	07-2003	EMC, resistibility and safety requirements and procedures for connection to unbundled cables
K.60	07-2003	Emission limits and test methods for telecommunication networks
K.61	09-2003	Guidance to measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installations
K.62	02-2004	System level radiated emissions compliance using mathematical modelling
K.63	02-2004	Maintaining the suitability of production telecommunications equipment to its intended electromagnetic environment
K.64	02-2004	Safe working practices for outside equipment installed in particular environments
K.65	12-2004	Overvoltage and overcurrent requirements for termination modules with contacts for test ports or SPDs
K.66	12-2004	Protection of customer premises from overvoltages

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Series L: Construction, installation and protection of cables and other elements of outside plant

Number	Approval Date	Recommendation Title	Status
		Construction, installation and protection of cables and other elements of outside plant	
L.1	11-1988	Construction, installation and protection of telecommunication cables in public networks	
L.2	11-1988	Impregnation of wooden poles	
L.3	11-1988	Armouring of cables	
L.4	11-1988	Aluminium cable sheaths	
L.5	11-1988	Cable sheaths made of metals other than lead or aluminium	
L.6	11-1988	Methods of keeping cables under gas pressure	
L.7	11-1988	Application of joint cathodic protection	
L.8	11-1988	Corrosion caused by alternating current	
L.9	11-1988	Methods of terminating metallic cable conductors	
L.10	12-2002	Optical fibre cables for duct and tunnel application	
L.11	11-1988	Joint use of tunnels by pipelines and telecommunication cables, and the standardization of underground duct plans	
L.12	05-2000	Optical fibre joints	
L.13	04-2003	Performance requirements for passive optical nodes: Sealed closures for outdoor environments	
L.14	07-1992	Measurement method to determine the tensile performance of optical fibre cables under load	
L.15	03-1993	Optical local distribution networks – Factors to be considered for their construction	
L.16	03-1993	Conductive plastic material (CPM) as protective covering for metal cable sheaths	
L.17	06-1995	Implementation of connecting customers into the public switched telephone network (PSTN) via optical fibres	
L.17 Appendix I	02-1997	Examples of possible applications	
L.18	10-1996	Sheath closures for terrestrial copper telecommunication cables	
L.19	11-2003	Multi-pair copper network cable supporting shared multiple services such as POTS, ISDN and xDSL	
L.20	10-1996	Creation of a fire security code for telecommunication facilities	
L.21	10-1996	Fire detection and alarm systems, detector and sounder devices	
L.22	10-1996	Fire protection	

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L.23	10-1996	Fire extinction – Classification and location of fire extinguishing installations and equipment on premises
L.24	10-1996	Classification of outside plant waste
L.25	10-1996	Optical fibre cable network maintenance
L.26	12-2002	Optical fibre cables for aerial application
L.27	10-1996	Method for estimating the concentration of hydrogen in optical fibre cables
L.28	10-2002	External additional protection for marinized terrestrial cables
L.29	01-2002	As-laid report and maintenance/repair log for marinized terrestrial cable installation
L.30	10-1996	Markers on marinized terrestrial cables
L.31	10-1996	Optical fibre attenuators
L.32	10-1998	Protection devices for through-cable penetrations of fire-sector partitions
L.33	10-1998	Periodic control of fire extinction devices in telecommunication buildings
L.34	10-1998	Installation of Optical Fibre Ground Wire (OPGW) cable
L.35	10-1998	Installation of optical fibre cables in the access network
L.36	10-1998	Single mode fibre optic connectors
L.37	10-1998	Fibre optic (non-wavelength selective) branching devices
L.38	09-1999	Use of trenchless techniques for the construction of underground infrastructures for telecommunication cable installation
L.39	05-2000	Investigation of the soil before using trenchless techniques
L.40	10-2000	Optical fibre outside plant maintenance support, monitoring and testing system
L.41	05-2000	Maintenance wavelength on fibres carrying signals
L.42	05-2003	Extending optical fibre solutions into the access network
L.43	12-2002	Optical fibre cables for buried application
L.44	10-2000	Electric power supply for equipment installed as outside plant
L.45	10-2000	Minimizing the effect on the environment from the outside plant in telecommunication networks
L.46	10-2000	Protection of telecommunication cables and plant from biological attack
L.47	10-2000	Access facilities using hybrid fibre/copper networks
L.48	03-2003	Mini-trench installation technique
L.49	03-2003	Micro-trench installation technique
L.50	11-2003	Requirements for passive optical nodes: Optical distribution frames for central office environments

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L.51	04-2003	Passive node elements for fibre optic networks – General principles and definitions for characterization and performance evaluation	
L.52	05-2003	Deployment of Passive Optical Networks (PON)	
L.53	05-2003	Optical fibre maintenance criteria for access networks	
L.54	02-2004	Splice closure for marinized terrestrial cables (MTC)	
L.55	11-2003	Digital database for marine cables and pipelines	
L.56	05-2003	Installation of optical fibre cables along railways	
L.57	05-2003	Air-assisted installation of optical fibre cables	
L.58	03-2004	Optical fibre cables: Special needs for access network	
L.59	09-2004	Optical fibre cables for indoor application	Pre-published.
L.60	09-2004	Construction of optical/metallic hybrid cables	
L.61	07-2004	Optical fibre cable installation by floating technique	
L.62	09-2004	Practical aspects of unbundling services by multiple operators in copper access networks	
L.63	10-2004	Safety procedures for outdoor installations	Pre-published.

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Series M: Telecommunication management, including TMN and network maintenance

Number	Approval Date	Recommendation Title	Status
		Telecommunication management, including TMN and network maintenance	
M.10	10-1992	Scope and application of Recommendations for maintenance of telecommunication networks and services	
M.15	11-1988	Maintenance considerations for new systems	
M.20	10-1992	Maintenance philosophy for telecommunication networks	
M.21	10-1992	Maintenance philosophy for telecommunication services	
M.32	11-1988	Principles for using alarm information for maintenance of international transmission systems and equipment	
M.34	11-1988	Performance monitoring on international transmission systems and equipment	
M.35	11-1988	Principles concerning line-up and maintenance limits	
M.50	11-1988	Use of telecommunication terms for maintenance	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
M.60	03-1993	Maintenance terminology and definitions	
M.70	11-1988	Guiding principles on the general maintenance organization for telephone-type international circuits	
M.75	10-1992	Technical service	
M.80	11-1988	Control stations	
M.85	10-1992	Fault report points	
M.90	11-1988	Sub-control stations	
M.100	11-1988	Service circuits	
M.110	11-1988	Circuit testing	
M.120	11-1988	Access points for maintenance	
M.125	11-1988	Digital loopback mechanisms	
M.160	11-1988	Stability of transmission	
M.320	11-1988	Numbering of the channels in a group	
M.330	11-1988	Numbering of groups within a supergroup	
M.340	11-1988	Numbering of supergroups within a mastergroup	
M.350	11-1988	Numbering of mastergroups within a supermastergroup	
M.380	11-1988	Numbering in coaxial systems	

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M.390	11-1988	Numbering in systems on symmetric pair cable
M.400	11-1988	Numbering in radio-relay links or open-wire line systems
M.410	11-1988	Numbering of digital blocks in transmission systems
M.450	11-1988	Bringing a new international transmission system into service
M.460	11-1988	Bringing international group, supergroup, etc., links into service
M.470	11-1988	Setting up and lining up analogue channels for international telecommunication services
M.475	11-1988	Setting up and lining up mixed analogue/digital channels for international telecommunication services
M.495	11-1988	Transmission restoration and transmission route diversity: Terminology and general principles
M.496	11-1988	Functional organization for automatic transmission restoration
M.500	11-1988	Routine maintenance measurements to be made on regulated line sections
M.510	11-1988	Readjustment to the nominal value of a regulated line section (on a symmetric pair line, a coaxial line or a radio-relay link)
M.520	11-1988	Routine maintenance on international group, supergroup, etc., links
M.525	11-1988	Automatic maintenance procedures for international group, supergroup, etc., links
M.530	11-1988	Readjustment to the nominal value of an international group, supergroup, etc., link
M.535	11-1988	Special maintenance procedures for multiple destination, unidirectional (MU) group and supergroup links
M.540	11-1988	Routine maintenance of carrier and pilot generating equipment
M.556	11-1988	Setting up and initial testing of digital channels on an international digital path or block
M.560	11-1988	International telephone circuits – Principles, definitions and relative transmission levels
M.562	11-1988	Types of circuit and circuit section
M.565	11-1988	Access points for international telephone circuits
M.570	11-1988	Constitution of the circuit; preliminary exchange of information
M.580	11-1988	Setting up and lining up an international circuit for public telephony
M.585	11-1988	Bringing an international digital circuit into service
M.590	11-1988	Setting up and lining up a circuit fitted with a compandor
M.600	11-1988	Organization of routine maintenance measurements on circuits
M.605	11-1988	Routine maintenance schedule for international public telephony circuits
M.610	11-1988	Periodicity of maintenance measurements on circuits

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M.620	11-1988	Methods for carrying out routine measurements on circuits
M.630	11-1988	Maintenance of circuits using control chart methods
M.650	11-1988	Routine line measurements to be made on the line repeaters of audio- frequency sections or circuits
M.660	11-1988	Periodical in-station tests of echo suppressors complying with Recommendations G.161 and G.164
M.665	11-1988	Testing of echo cancellers
M.670	11-1988	Maintenance of a circuit fitted with a compandor
M.675	11-1988	Lining up and maintaining international demand assignment circuits (SPADE)
M.710	11-1988	General maintenance organization for the international automatic and semi-automatic telephone service
M.715	11-1988	Fault report point (circuit)
M.716	11-1988	Fault report point (network)
M.717	11-1988	Testing point (transmission)
M.718	11-1988	Testing point (line signalling)
M.719	11-1988	Testing point (switching and interregister signalling)
M.720	11-1988	Network analysis point
M.721	11-1988	System availability information point
M.722	11-1980	Network management point
M.723	11-1988	Circuit control station
M.724	11-1988	Circuit sub-control station
M.725	11-1988	Restoration control point
M.726	11-1988	Maintenance organization for the wholly digital international automatic and semi-automatic telephone service
M.729	11-1988	Organization of the maintenance of international public switched telephone circuits used for data transmission
M.730	11-1988	Maintenance methods
M.731	11-1988	Subjective testing
M.732	11-1988	Signalling and switching routine maintenance tests and measurements
M.733	11-1988	Transmission routine maintenance measurements on automatic and semi-automatic telephone circuits
M.734	11-1988	Exchange of information on incoming test facilities at international switching centres
M.760	11-1988	Transfer link for common channel Signalling System No. 6
M.762	11-1988	Maintenance of common channel Signalling System No. 6

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M.800 11-1988 Use of circuits for voice-frequency telegraphy  M.810 11-1988 Setting up and lining up an international voice-frequency telegraph link for public telegraph circuits (for 50, 100 and 200 baud modulation rates)  M.820 11-1988 Periodicity of routine tests on international voice-frequency telegraph links  M.830 11-1988 Routine measurements to be made on international voice-frequency telegraph links  M.850 11-1988 International time division multiplex (TDM) telegraph systems  M.880 11-1988 International phototelegraph transmission  M.900 11-1988 Use of leased group and supergroup links for wide-spectrum signal transmission (data, facsimile, etc.)  M.910 11-1988 Setting up and lining up an international leased group link for wide-spectrum signal transmission (data, facsimile, etc.)  M.1011 11-1988 Constitution and nomenclature of international leased circuits  M.1012 11-1988 Circuit control station for leased and special circuits  M.1013 11-1988 Sub-control station for leased and special circuits  M.1014 11-1988 Transmission maintenance point (international line) (TMP-IL)  M.1015 11-1988 Types of transmission no leased circuits  M.1016 11-1988 Assessment of the service availability performance of international leased circuits  M.1020 03-1993 Characteristics of special quality international leased circuits with special bandwidth conditioning  M.1025 03-1993 Characteristics of ordinary quality international leased circuits with basic bandwidth conditioning  M.1030 11-1988 Characteristics of ordinary quality international leased circuits with basic bandwidth conditioning  M.1040 11-1988 Characteristics of ordinary quality international leased circuits with basic bandwidth conditioning  M.1050 06-1996 Preliminary exchange of information for the provision of international leased circuits with analogue presentation to the user  M.1050 11-1988 Lining up an international multiterminal leased circuit with analogue presentation to the user  M.1050 04-1997 Maintenance aspects of maritime/fand mobile telecommunicat			
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M.1160 04-1997 Maintenance aspects of aeronautical mobile telecommunication service	M.1140	10-1992	Maritime mobile telecommunication services via satellite
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M.1170	04-1997	Maintenance aspects of mobile digital telecommunication service via satellite	
M.1230	05-1996	Method to improve the management of operations and maintenance processes in the international telephone network	
M.1235	11-1988	Use of automatically generated test calls for assessment of network performance	
M.1300	10-1997	Maintenance of international data transmission systems operating in the range 2.4 kbit/s to 140 Mbit/s	
M.1301	01-2001	General description and operational procedures for international SDH leased circuits	
M.1320	11-1988	Numbering of channels in data transmission systems	
M.1340	02-2000	Performance objectives, allocations and limits for international PDH leased circuits and supporting data transmission links and systems	
M.1340 (2000) Corrigendum 1	08-2001		Available only in PDF.
M.1350	11-1988	Setting up, lining up and characteristics of international data transmission systems operating in the range 2.4 kbit/s to 14.4 kbit/s	
M.1355	11-1988	Maintenance of international data transmission systems operating in the range 2.4 to 14.4 kbit/s	
M.1370	06-1998	Bringing-into-service of international data transmission systems	
M.1375	06-1998	Maintenance of international data transmission systems	
M.1380	02-2000	Bringing-into-service of international leased circuits that are supported by international data transmission systems	
M.1385	02-2000	Maintenance of international leased circuits that are supported by international data transmission systems	
M.1400	01-2004	Designations for interconnections among operators' networks	
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M.1510	10-1992	Exchange of contact point information for the maintenance of international services and the international network	
M.1520	10-1992	Standardized information exchange between Administrations	
M.1530	03-1999	Network maintenance information	
M.1532	02-2000	Network maintenance service performance agreement (MSPA)	
M.1535	05-1996	Principles for maintenance information to be exchanged at customer contact point (MICC)	
M.1537	10-1997	Definition of maintenance information to be exchanged at customer contact point (MICC)	
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M.1550	10-1992	Escalation procedure	
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M.2100	04-2003	Performance limits for bringing-into-service and maintenance of international multi-operator PDH paths and connections	
M.2101	06-2003	Performance limits for bringing-into-service and maintenance of international multi-operator SDH paths and multiplex sections	
M.2102	02-2000	Maintenance thresholds and procedures for recovery mechanisms (protection and restoration) of international SDH VC trails (paths) and multiplex sections	
M.2110	07-2002	Bringing into service international multi-operator paths, sections and transmission systems	
M.2120	07-2002	International multi-operator paths, sections and transmission systems fault detection and localization procedures	
M.2130	02-2000	Operational procedures for the maintenance of the transport network	
M.2140	02-2000	Transport network event correlation	
M.2201	03-2001	Performance objectives, allocations and limits for bringing-into-service and maintenance of international ATM virtual path and virtual channel connections	
M.2301	07-2002	Performance objectives and procedures for provisioning and maintenance of IP-based networks	
M.2401	12-2003	Error performance limits and procedures for bringing-into-service and maintenance of multi-operator international paths and sections within an optical transport network	
M.3000	02-2000	Overview of TMN Recommendations	
M.3010	02-2000	Principles for a telecommunications management network	
M.3010 (2000) Amendment 1	12-2003	TMN conformance and TMN compliance	
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M.3016	06-1998	TMN Security Overview	
M.3016.1	04-2005	Security for the management plane: Security requirements	Pre-published.
M.3016.2	04-2005	Security for the management plane: Security services	Pre-published.
M.3016.3	04-2005	Security for the management plane: Security mechanism	Pre-published.
M.3016.4	04-2005	Security for the management plane: Profile proforma	Pre-published.
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M.3020	02-2000	TMN Interface Specification Methodology	
M.3030	08-2002	Telecommunications Markup Language (tML) framework	
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M.3050.0	07-2004	Enhanced Telecom Operations Map (eTOM) – Introduction	

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M.3101 07-1995 Managed object conformance statements for the generic network information model  TMN management services for dedicated and reconfigurable circuits network  M.3108.1 03-1999 Information model for management of leased circuit and reconfigurable services  M.3108.1 (1999) Corrigendum 1  M.3108.2 02-2000 Information model for connection management of preprovisioned service link connections to form a reconfigurable leased service  M.3108.3 01-2001 Information model for management of virtual private network service					
and descriptions  Enhanced Telecom Operations Map (eTOM) – Representative process flows  M.3050.4 06-2004 Enhanced Telecom Operations Map (eTOM) – B2B Integration: Using B2B inter-enterprise integration with the eTOM  M.3100 04-2005 Generic network information model  M.3101 07-1995 Managed object conformance statements for the generic network information model  TMN management services for dedicated and reconfigurable circuits network  M.3108.1 03-1999 Information model for management of leased circuit and reconfigurable services  M.3108.2 02-2000 Information model for connection management of preprovisioned service  M.3108.3 01-2001 CORBA generic network and network element level information model  M.3120 (2001) 03-2003 Amendment 1  M.3120 (2001) 03-2003 Protection switching  M.3120 (2001) 03-2003 Amendment 2  M.3200 04-1997 TMN management services and telecommunications managed areas: overview  M.3208.1 10-1997 Catalogue of TMN management information  M.3208.2 03-1999 Connection management of pre-provisioned service link connections to form a reconfigurable circuits network  M.3208.1 10-1997 Connection switching	M.30	050.1	06-2004		
M.3050.4 06-2004 Enlarced Telecorm Operations Map (eTOM) – B2B integration: Using B2B inter-enterprise integration with the eTOM  M.3100 04-2005 Generic network information model Not available, contact					

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M.3211.1	05-1996	TMN management service: Fault and performance management of the ISDN access
M.3300	06-1998	TMN F interface requirements
M.3320	04-1997	Management requirements framework for the TMN X-Interface
M.3341	12-2003	Requirements for QoS/SLA management over the TMN X-interface for IP-based services
M.3350	05-2004	TMN service management requirements for information interchange across the TMN X-interface to support provisioning of Emergency Telecommunication Service (ETS)
M.3400	02-2000	TMN management functions
M.3600	10-1992	Principles for the management of ISDNs
M.3602	10-1992	Application of maintenance principles to ISDN subscriber installations
M.3603	10-1992	Application of maintenance principles to ISDN basic rate access
M.3604	10-1992	Application of maintenance principles to ISDN primary rate access
M.3605	10-1992	Application of maintenance principles to static multiplexed ISDN basic rate access
M.3610	05-1996	Principles for applying the TMN concept to the management of B-ISDN
M.3611	04-1997	Test management of the B-ISDN ATM layer using the TMN
M.3620	10-1992	Principles for the use of ISDN test calls, systems and responders
M.3621	07-1995	Integrated management of the ISDN customer access
M.3640	10-1992	Management of the D-channel – Data link layer and network layer
M.3641	10-1994	Management information model for the management of the data link and network layer of the ISDN D-channel
M.3650	04-1997	Network performance measurements of ISDN calls
M.3660	10-1992	ISDN interface management services
M.4010	10-1992	Inter-Administration agreements on common channel Signalling System No. 6
M.4030	10-1992	Transmission characteristics for setting up and lining up a transfer link for common channel Signalling System N° 6 (analogue version)
M.4100	05-1996	Maintenance of common channel Signalling System No. 7
M.4110	05-1996	Inter-Administration agreements on common channel Signalling System No. 7

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Series N: Maintenance: international sound programme and television transmission circuits

Number	Approval Date	Recommendation Title	Status
		Maintenance: international sound programme and television transmission circuits	
N.1	03-1993	Definitions for application to international sound-programme and television-sound transmission	
N.2	11-1988	Different types of sound-programme circuit	
N.3	11-1988	Control circuits	
N.4	11-1988	Definition and duration of the line-up period and the preparatory period	
N.5	11-1988	Sound-programme control, sub-control and send reference stations	
N.10	03-1993	Limits for the lining-up of international sound-programme links and connections	
N.11	11-1988	Essential transmission performance objectives for international sound-programme centres (ISPC)	
N.12	11-1988	Measurements to be made during the line-up period that precedes a sound-programme transmission	
N.13	11-1988	Measurements to be made by the broadcasting organizations during the preparatory period	
N.15	11-1988	Maximum permissible power during an international sound-programme transmission	
N.16	11-1988	Identification signal	
N.17	11-1988	Monitoring the transmission	
N.18	11-1988	Monitoring for charging purposes, releasing	
N.21	11-1988	Limits and procedures for the lining-up of a sound-programme circuit	
N.23	11-1988	Maintenance measurements to be made on international sound- programme circuits	
N.51	11-1988	Definitions for application to international television transmissions	
N.52	11-1988	Multiple destination television transmissions and coordination centres	
N.54	11-1988	Definition and duration of the line-up period and the preparatory period	
N.55	03-1993	Organization, responsibilities and functions of control and sub-control international television centres and control and sub-control stations for international television connections, links, circuits and circuit sections	
N.60	03-1993	Nominal amplitude of video signals at video interconnection points	
N.61	11-1988	Measurements to be made before the line-up period that precedes a television transmission	
N.62	03-1993	Tests to be made during the line-up period that precedes a television transmission	
N.63	11-1988	Test signals to be used by the broadcasting organizations during the preparatory period	

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N.64	11-1988	Quality and impairment assessment
N.67	03-1993	Monitoring television transmissions – Use of the field blanking interval
N.73	11-1988	Maintenance of permanent international television circuits, links and connections

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Series O: Specifications of measuring equipment

Number	Approval Date	Recommendation Title	Status
		Specifications of measuring equipment	
O.1	02-2000	Scope and application of measurement equipment specifications covered in the O-series Recommendations	
O.3	10-1992	Climatic conditions and relevant tests for measuring equipment	
O.6	11-1988	1020 Hz reference test frequency	
O.9	03-1999	Measuring arrangements to assess the degree of unbalance about earth	
O.11	10-1992	Maintenance access lines	
O.22	10-1992	CCITT automatic transmission measuring and signalling testing equipment ATME No. 2	
O.27	11-1988	In-station echo canceller test equipment	
O.33	07-1995	Automatic equipment for rapidly measuring stereophonic pairs and monophonic sound-programme circuits, links and connections	
O.41	10-1994	Psophometer for use on telephone-type circuits	
O.42	11-1988	Equipment to measure non-linear distortion using the 4-tone intermodulation method	
O.61	11-1988	Simple equipment to measure interruptions on telephone-type circuits	
O.62	11-1988	Sophisticated equipment to measure interruptions on telephone-type circuits	
O.71	11-1988	Impulsive noise measuring equipment for telephone-type circuits	
O.81	11-1988	Group-delay measuring equipment for telephone-type circuits	
O.81 Appendix I	06-1998	A measuring signal (multitone test signal) for fast measurement of amplitude and phase for telephone type circuits	
O.81 Appendix I Erratum1	06-2000		
O.82	11-1988	Group-delay measuring equipment for the range 5 to 600 kHz	
O.91	11-1988	Phase jitter measuring equipment for telephone-type circuits	
O.95	11-1988	Phase and amplitude hit counters for telephone-type circuits	
O.111	11-1988	Frequency shift measuring equipment for use on carrier channels	
O.131	11-1988	Quantizing distortion measuring equipment using a pseudo-random noise test signal	
O.132	11-1988	Quantizing distortion measuring equipment using a sinusoidal test signal	
O.133	03-1993	Equipment for measuring the performance of PCM encoders and decoders	
O.150	05-1996	General requirements for instrumentation for performance measurements on digital transmission equipment	

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O.150 (1996) Corrigendum 1	05-2002		
O.151	10-1992	Error performance measuring equipment operating at the primary rate and above	
O.151 (1992) Corrigendum 1	05-2002		
O.152	10-1992	Error performance measuring equipment for bit rates of 64 kbit/s and N $x$ 64 kbit/s	
O.153	10-1992	Basic parameters for the measurement of error performance at bit rates below the primary rate	
O.161	11-1988	In-service code violation monitors for digital systems	
O.162	10-1992	Equipment to perform in-service monitoring on 2048, 8448, 34 368 and 139 264 kbit/s signals	
O.163	11-1988	Equipment to perform in-service monitoring on 1544 kbit/s signals	
O.171	04-1997	Timing jitter and wander measuring equipment for digital systems which are based on the plesiochronous digital hierarchy (PDH)	
O.172	04-2005	Jitter and wander measuring equipment for digital systems which are based on the synchronous digital hierarchy (SDH)	Pre-published.
O.173	03-2003	Jitter measuring equipment for digital systems which are based on the Optical Transport Network (ONT)	
O.181	05-2002	Equipment to assess error performance on STM-N interfaces	
O.191	02-2000	Equipment to measure the cell transfer performance of ATM connections	
O.201	07-2003	Q-factor test equipment to estimate the transmission performance of optical channels	
Recommendation count:		8	

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 $Series \ P : Telephone transmission quality, telephone installations, local line networks$ 

Number	Approval Date	Recommendation Title	Status
		Telephone transmission quality, telephone installations, local line networks	
P.10	12-1998	Vocabulary of terms on telephone transmission quality and telephone sets	
P.10 (1998) Amendment 1	11-2003	New Annex A – List of psychoacoustic parameters	
P.11	03-1993	Effect of transmission impairments	
P.16	11-1988	Subjective effects of direct crosstalk; thresholds of audibility and intelligibility	
P.32	11-1988	Evaluation of the efficiency of telephone booths and acoustic hoods	
P.48	11-1988	Specification for an intermediate reference system	
P.50	09-1999	Artificial voices	
P.50 Erratum 1	05-2000		
P.50 Appendix I	02-1998	Test signals	
P.51	08-1996	Artificial mouth	
P.52	03-1993	Volume meters	
O.41	10-1994	Psophometer for use on telephone-type circuits	
P.54	11-1988	Sound level meters (apparatus for the objective measurement of room noise)	
P.55	11-1988	Apparatus for the measurement of impulsive noise	
P.56	03-1993	Objective measurement of active speech level	
P.57	07-2002	Artificial ears	
P.57 (2002) Corrigendum 1	01-2005		
P.58	08-1996	Head and torso simulator for telephonometry	
P.58 Erratum 1	01-2003		
P.59	03-1993	Artificial conversational speech	
P.61	11-1988	Methods for the calibration of condenser microphones	
P.64	09-1999	Determination of sensitivity/frequency characteristics of local telephone systems	
P.64 Erratum 1	05-2000		
P.75	11-1988	Standard conditioning method for handsets with carbon microphones	
P.76	11-1988	Determination of loudness ratings; fundamental principles	

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P.78	02-1996	Subjective testing method for determination of loudness ratings in accordance with Recommendation P.76	
P.79	09-1999	Calculation of loudness ratings for telephone sets	
P.79 Erratum 1	05-2000		
P.79 (1999) Corrigendum 1	10-2000		
P.79 (1999) Corrigendum 2	02-2001		
P.79 (1999) Corrigendum 3	01-2005		
P.79 Annex G	11-2001	Wideband loudness rating algorithm	
P.82	11-1988	Method for evaluation of service from the standpoint of speech transmission quality	
P.85	06-1994	A method for subjective performance assessment of the quality of speech voice output devices	
P.300	11-2001	Transmission performance of group audio terminals (GATs)	
P.310	03-2003	Transmission characteristics for telephone band (300-3400 Hz) digital telephones	
P.311	02-1998	Transmission characteristics for wideband (150-7000 Hz) digital handset telephones	
P.313	05-2004	Transmission characteristics for cordless and mobile digital terminals	
P.330	03-2003	Speech processing devices for acoustic enhancement	
P.330 (2003) Amendment 1	09-2003		
P.340	05-2000	Transmission characteristics and speech quality parameters of handsfree terminals	
P.340 (2000) Corrigendum 1	03-2004		
P.341	02-1998	Transmission characteristics for wideband (150-7000 Hz) digital handsfree telephony terminals	
P.341 (1998) Corrigendum 1	09-1999		
P.342	05-2000	Transmission characteristics for telephone band (300-3400 Hz) digital loudspeaking and hands-free telephony terminals	
P.350	03-2001	Handset dimensions	
P.360	12-1998	Efficiency of devices for preventing the occurrence of excessive acoustic pressure by telephone receivers	
P.370	08-1996	Coupling hearing aids to telephone sets	
P.380	11-2003	Electro-acoustic measurements on headsets	
P.501	05-2000	Test signals for use in telephonometry	Available only in MS Word.

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P.501 Erratum 1	09-2001		
P.501 (2000) Amend.1	05-2004	New annexes A and B	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
P.502	05-2000	Objective test methods for speech communication systems using complex test signals	
P.502 Erratum 1	07-2001		
P.561	07-2002	In-service non-intrusive measurement device – Voice service measurements	
P.561 App. III	02-1998	Digital speech recordings	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
P.562	05-2004	Analysis and interpretation of INMD voice-service measurements	
P.563	05-2004	Single-ended method for objective speech quality assessment in narrow-band telephony applications	Available only in MS Word.
P.581	05-2000	Use of head and torso simulator (HATS) for hands-free terminal testing	
P.800	08-1996	Methods for subjective determination of transmission quality	
P.800.1	03-2003	Mean Opinion Score (MOS) terminology	
P.810	02-1996	Modulated noise reference unit (MNRU)	
P.830	02-1996	Subjective performance assessment of telephone-band and wideband digital codecs	
P.831	12-1998	Subjective performance evaluation of network echo cancellers	
P.832	05-2000	Subjective performance evaluation of hands-free terminals	
P.833	02-2001	Methodology for derivation of equipment impairment factors from subjective listening-only tests	
P.834	07-2002	Methodology for the derivation of equipment impairment factors from instrumental models	Available only in MS Word.
P.834 (2002) Corrigendum 1	01-2005		
P.835	11-2003	Subjective test methodology for evaluating speech communication systems that include noise suppression algorithm	
P.840	11-2003	Subjective listening test method for evaluating circuit multiplication equipment	
P.851	11-2003	Subjective quality evaluation of telephone services based on spoken dialogue systems	
P.862	02-2001	Perceptual evaluation of speech quality (PESQ): An objective method for end-to-end speech quality assessment of narrow-band telephone networks and speech codecs	Available only in MS Word.
P.862 (2001) Amd.1	03-2003	Revised Annex A: Source code for reference implementation and conformance tests	Available only in MS Word.

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P.862.1	11-2003	Mapping function for transforming P.862 raw result scores to MOS-LQO	
P.880	05-2004	Continuous evaluation of time-varying speech quality	Pre-published.
P.910	09-1999	Subjective video quality assessment methods for multimedia applications	
P.911	12-1998	Subjective audiovisual quality assessment methods for multimedia applications	
P.911 (1998) Corrigendum 1	09-1999		
P.920	05-2000	Interactive test methods for audiovisual communications	
P.930	08-1996	Principles of a reference impairment system for video	
P.931	12-1998	Multimedia communications delay, synchronization and frame rate measurement	
P.1010	07-2004	Fundamental voice transmission objectives for VoIP terminals and gateways	
P.supp10	11-1988	<a name="P2-12">Considerations relating to transmission characteristics for analogue handset telephones</a>	
P.supp16	11-1988	<a name="P3-4">Guidelines for placement of microphones and loudspeakers in telephone conference rooms and for group audio terminals (GATs)</a>	
P.supp20	03-1993	<a name="P8-1">Examples of measurements of handset receive-frequency responses: dependence on earcap leakage losses</a>	
P.Sup23	02-1998	ITU-T coded-speech database	

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Series Q: Switching and signalling

Number	Approval Date	Recommendation Title	Status
		Switching and signalling	
Q.1	11-1988	Signal receivers for manual working	
Q.2	11-1988	Signal receivers for automatic and semi-automatic working, used for manual working	
Q.4	11-1988	Automatic switching functions for use in national networks	
Q.5	11-1988	Advantages of semi-automatic service in the international telephone service	
Q.6	11-1988	Advantages of international automatic working	
Q.7	11-1988	Signalling systems to be used for international automatic and semi- automatic telephone working	
Q.8	11-1988	Signalling systems to be used for international manual and automatic working on analogue leased circuits	
Q.9	11-1988	Vocabulary of switching and signalling terms	
E.164	02-2005	The international public telecommunication numbering plan	Pre-published
E.164 Supplement 1	03-1998	Alternatives for carrier selection and network identification	
E.164 Supplement 2	11-1998	Number Portability	
E.164 Supplement 3	05-2004	Operational and administrative issues associated with national implementations of the ENUM functions	
E.164 Supplement 4	05-2004	Operational and administrative issues associated with the implementation of ENUM for non-geographic country codes	
Q.12	11-1988	Overflow – alternative routing – rerouting – automatic repeat attempt	
Q.14	11-1988	Means to control the number of satellite links in an international telephone connection	
Q.20	11-1988	Comparative advantages of "in-band" and "out-band" systems	
Q.21	11-1988	Systems recommended for out-band signalling	
Q.22	11-1988	Frequencies to be used for in-band signalling	
Q.23	11-1988	Technical features of push-button telephone sets	
Q.24	11-1988	Multifrequency push-button signal reception	
Q.25	11-1988	Splitting arrangements and signal recognition times in "in-band" signalling systems	
Q.26	11-1988	Direct access to the international network from the national network	
Q.27	11-1988	Transmission of the answer signal	

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Q.28	11-1988	Determination of the moment of the called subscriber's answer in the automatic service
Q.29	11-1988	Causes of noise and ways of reducing noise in telephone exchanges
Q.30	11-1988	Improving the reliability of contacts in speech circuits
Q.31	11-1988	Noise in a national 4-wire automatic exchange
Q.32	11-1988	Reduction of the risk of instability by switching means
Q.33	11-1988	Protection against the effects of faulty transmission on groups of circuits
E.180/Q.35	03-1998	Technical characteristics of tones for the telephone service
Q.44	11-1988	Attenuation distortion
Q.45	10-1984	Transmission characteristics of an analogue international exchange
Q.45bis	11-1988	Transmission characteristics of an analogue international exchange
Q.48	11-1988	Demand assignment signalling systems
O.22	10-1992	CCITT automatic transmission measuring and signalling testing equipment ATME No. 2
Q.50	07-2001	Signalling between Circuit Multiplication Equipment (CME) and International Switching Centres (ISC)
Q.50.1	07-2001	Signalling between International Switching Centres (ISC) and Digital Circuit Multiplication Equipment (DCME) including the control of compression/decompression
Q.50.2	12-2002	Signalling between International Switching Centres (ISC) and Digital Circuit Multiplication Equipment (DCME) including the control of compression/decompression over an IP network
Q.52	03-2001	Signaling between international switching centers and stand-alone echo control devices
Q.55	12-1999	Signalling between signal processing network equipments (SPNE) and international switching centres (ISC)
Q.56	05-2001	Signalling between signal processing network equipment (SPNE) and international switching centres (ISC) over an IP network
Q.65	06-2000	The unified functional methodology for the characterization of services and network capabilities including alternative object oriented techniques
Q.68	03-1993	Overview of methodology for developing management services
Q.71	03-1993	ISDN circuit mode switched bearer services
Q.72	03-1993	Stage 2 description for packet mode services
Q.76	02-1995	Service procedures for Universal Personal Telecommunication – Functional modelling and information flows
Q.80	11-1988	Introduction to stage 2 service descriptions for supplementary services
		Stage 2 description for number identification supplementary services
Q.81.1	11-1988	Direct dialling-in

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Q.81.2	02-1992	Multiple subscriber number	
Q.81.3	09-1991	Calling line identification presentation (CLIP) and calling line identification restriction (CLIR)	
Q.81.5	09-1991	Connected line identification, presentation and restriction (COLP) and (COLR)	
Q.81.7	06-1997	Malicious call identification (MCID)	
Q.81.8	02-1992	Sub-addressing (SUB)	
		Stage 2 description for call offering supplementary services	
Q.82.1	11-1988	Call transfer	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
Q.82.2	03-1993	call forwarding	
Q.82.3	03-1993	Call deflection	
Q.82.4	11-1988	Line hunting	
Q.82.7	07-1996	Explicit call transfer	
		Stage 2 description for call completion supplementary services	
Q.83.1	09-1991	Call waiting (CW)	
Q.83.2	02-1992	Call hold	
Q.83.3	11-1988	Completion of call to busy subscriber	Available only in PDF.
Q.83.4	09-1991	Terminal portability	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
		Stage 2 description for multiparty supplementary services	
Q.84.1	03-1993	Conference calling (CONF)	
Q.84.2	10-1995	Three-party service	
		Stage 2 description for community of interest supplementary services	
Q.85.1	02-1992	Closed user group	
Q.85.3	02-1992	Multi-level precedence and preemption (MLPP)	
Q.85.6	02-1995	Global Virtual Network Service (GVNS)	
Q.85.6 Annex A	07-1996	Service procedures and information flows based on intelligent network CS-1 capabilities	
		Stage 2 description for charging supplementary services	

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Q.86.1	11-1988	Credit card call	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
Q.86.2	10-1995	Advice of charge (AOC)	
Q.86.3	03-1993	Reverse charging (REV)	
Q.86.4	06-1997	International Freephone Service (IFS)	
Q.86.7	10-1995	International Telecommunication Charge Card (ITCC)	
		Stage 2 description for additional information transfer supplementary services	
Q.87.1	03-1993	User-to-user signalling (UUS)	
Q.87.2	11-1988	User signalling bearer services	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
Q.101	11-1988	Facilities provided in international semi-automatic working	
Q.102	11-1988	Facilities provided in international automatic working	
Q.103	11-1988	Numbering used	
Q.104	11-1988	Language digit or discriminating digit	
Q.105	11-1988	National (significant) number	
Q.106	11-1988	The sending-finished signal	
Q.107	11-1988	Standard sending sequence of forward address information	
Q.107bis	03-1993	Analysis of forward address information for routing	
Q.108	11-1988	One-way or both-way operation of international circuits	
Q.109	11-1988	Transmission of the answer signal in international exchanges	
Q.110	11-1988	General aspects of the utilization of standardized CCITT signalling systems on PCM links	
Q.112	11-1988	Signal levels and signal receiver sensitivity	
Q.113	11-1988	Connection of signal receivers in the circuit	
Q.114	11-1988	Typical transmission requirements for signal senders and receivers	
Q.115.0	12-2002	Protocols for the control of signal processing network elements and functions	
Q.115.0 Erratum 1	09-2003		
Q.115.1	12-2002	Logic for the control of echo control devices and functions	
Q.116	11-1988	Indication given to the outgoing operator or calling subscriber in case of an abnormal condition	

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Q.117	11-1988	Alarms for technical staff and arrangements in case of faults
Q.118	09-1997	Abnormal conditions – Special release arrangements
Q.118bis	11-1988	Indication of congestion conditions at transit exchanges
Q.120-Q.139	11-1988	Specifications of Signalling system No. 4
Q.140-Q.180	11-1988	Specifications of Signalling System No. 5
Q.251-Q.300	11-1988	Specifications of Signalling System No. 6
Q.310-Q.332	11-1988	Specifications of Signalling System R1
Q.400-Q.490	11-1988	Specifications of Signalling System R2
Q.500	11-1988	Digital local, combined, transit and international exchanges – Introduction and field of application
Q.511	11-1988	Exchange interfaces towards other exchanges
Q.512	02-1995	Digital exchange interfaces for subscriber access
Q.513	03-1993	Digital exchange interfaces for operations, administration and maintenance
Q.521	03-1993	Digital exchange functions
Q.522	11-1988	Digital exchange connections, signalling and ancillary functions
Q.541	03-1993	Digital exchange design objectives – General
Q.542	03-1993	Digital exchange design objectives – Operations and maintenance
Q.543	03-1993	Digital exchange performance design objectives
Q.544	11-1988	Digital exchange measurements
Q.551	01-2002	Transmission characteristics of digital exchanges
Q.552	11-2001	Transmission characteristics at 2-wire analogue interfaces of digital exchanges
Q.553	11-2001	Transmission characteristics at 4-wire analogue interfaces of digital exchanges
Q.554	11-1996	Transmission characteristics at digital interfaces of digital exchanges
Q.601	03-1993	Interworking of signalling systems – General
Q.602	03-1993	Interworking of signalling systems – Introduction
Q.603	11-1988	Events
Q.604	03-1993	Interworking of signalling systems – Information analysis tables
Q.605	11-1988	Drawing conventions
Q.606	11-1988	Logic procedures
Q.607	11-1988	Interworking requirements for new signalling systems

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Q.608	11-1988	Miscellaneous interworking aspects
Q.611	11-1988	Logic procedures for incoming signalling system No. 4
Q.612	11-1988	Logic procedures for incoming signalling system No. 5
Q.613	11-1988	Logic procedures for incoming signalling system No. 6
Q.614	03-1993	Logic procedures for incoming Signalling System No. 7 (TUP)
Q.615	11-1988	Logic procedures for incoming signalling system R1
Q.616	11-1988	Logic procedures for incoming signalling system R2
Q.617	03-1993	Logic procedures for incoming signalling system No. 7 (ISUP)
Q.621	11-1988	Logic procedures for outgoing signalling system No. 4
Q.622	11-1988	Logic procedures for outgoing signalling system No. 5
Q.623	11-1988	Logic procedures for outgoing signalling system No. 6
Q.624	03-1993	Logic procedures for outgoing Signalling System No. 7 (TUP)
Q.625	11-1988	Logic procedures for outgoing signalling system R1
Q.626	11-1988	Logic procedures for outgoing signalling system R2
Q.627	03-1993	Logic procedures for outgoing Signalling System No. 7 (ISUP)
Q.634	11-1988	Logic procedures for interworking of signalling system No. 4 to R2
Q.642	11-1988	Logic procedures for interworking of signalling system No. 5 to No. 6
Q.643	11-1988	Logic procedures for interworking of signalling system No. 5 to No. 7 (TUP)
Q.644	11-1988	Logic procedures for interworking of signalling system No. 5 to R1
Q.645	11-1988	Logic procedures for interworking of signalling system No. 5 to R2
Q.646	03-1993	Logic procedures for interworking of Signalling System No. 5 to Signalling System No. 7 (ISUP)
Q.652	11-1988	Logic procedures for interworking of signalling system No. 6 to No. 5
Q.653	11-1988	Logic procedures for interworking of signalling system No. 6 to No. 7 (TUP)
Q.654	11-1988	Logic procedures for interworking of signalling system No. 6 to R1
Q.655	11-1988	Logic procedures for interworking of signalling system No. 6 to R2
Q.656	03-1993	Logic procedures for interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)
Q.662	11-1988	Logic procedures for interworking of signalling system No. 7 (TUP) to No. 5
Q.663	11-1988	Logic procedures for interworking of signalling system No. 7 (TUP) to No. 6

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Q.664	11-1988	Logic procedures for interworking of signalling system No. 7 (TUP) to No. 7 (TUP)
Q.665	11-1988	Logic procedures for interworking of signalling system No. 7 (TUP) to R1
Q.666	11-1988	Logic procedures for interworking of signalling system No. 7 (TUP) to R2
Q.667	03-1993	Logic procedures for interworking of Signalling System No. 7 (TUP) to Signalling System No. 7 (ISUP)
Q.671	11-1988	Logic procedures for interworking of signalling system R1 to No. 5
Q.672	11-1988	Logic procedures for interworking of signalling system R1 to No. 6
Q.673	11-1988	Logic procedures for interworking of signalling system R1 to No. 7 (TUP)
Q.674	11-1988	Logic procedures for interworking of signalling system R1 to R2
Q.675	03-1993	Logic procedures for interworking of Signalling System R1 to Signalling System No. 7 (ISUP)
Q.681	11-1988	Logic procedures for interworking of signalling system R2 to No. 4
Q.682	11-1988	Logic procedures for interworking of signalling system R2 to No. 5
Q.683	11-1988	Logic procedures for interworking of signalling system R2 to No. 6
Q.684	11-1988	Logic procedures for interworking of signalling system R2 to No. 7 (TUP)
Q.685	11-1988	Logic procedures for interworking of signalling system R2 to R1
Q.686	03-1993	Logic procedures for interworking of Signalling System R2 to Signalling System No. 7 (ISUP)
Q.690	03-1993	Logic procedures for interworking of Signalling System No. 7 (ISUP) to No. 5 $$
Q.691	03-1993	Logic procedures for interworking of Signalling System No. 7 (ISUP) to No. 6
Q.692	03-1993	Logic procedures for interworking of Signalling System No. 7 (ISUP) to No. 7 (TUP) $$
Q.694	03-1993	Logic procedures for interworking of signalling system No. 7 (ISUP) to R1
Q.695	03-1993	Logic procedures for interworking of Signalling System No. 7 (ISUP) to R2
Q.696	06-1997	Interworking between the Signalling System No. 7 ISDN User Part (ISUP) and Signalling Systems No. 5, R2 and Signalling System No. 7 TUP
Q.698	03-1993	Interworking of Signalling System No. 7 ISUP, TUP and Signalling System No. 6 using arrow diagrams
Q.699	09-1997	Interworking between ISDN access and non-ISDN access over ISDN User Part of Signalling System No. 7
Q.699 Addendum 1	12-1999	DSS1-SS7 interworking for call completion on no reply
Q.699.1	05-1998	Interworking between ISDN access and non-ISDN access over ISDN user part of signalling system No. 7: Support of VPN applications with PSS1 information flows
Q.700	03-1993	Introduction to CCITT Signalling System No. 7

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Q.701	03-1993	Functional description of the message transfer part (MTP) of Signalling System No. 7
Q.702	11-1988	Signalling data link
Q.703	07-1996	Signalling link
Q.704	07-1996	Signalling network functions and messages
Q.705	03-1993	Signalling network structure
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Q.731.3	03-1993	Calling line identification presentation (CLIP)
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Q.731.7	06-1997	Malicious call identification (MCID)
Q.731.8	02-1992	Sub-addressing (SUB)
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Q.825	06-1998	Specification of TMN applications at the Q3 interface: call detail recording	
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06-2000	Information flows for IMT-2000 capability set 1	
06-2000	Radio-technology independent requirements for IMT-2000 layer 2 radio interface	
04-2002	IMT-2000 references to release 1999 of GSM evolved UMTS core network with UTRAN access network	
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Control and application layer  Q.Sup49  03-2004  Technical Report TRQ.2840: Signalling requirements to support IP telephony  Q.Sup50  03-2004  Technical Report TRQ.2145: Requirements for a Narrow-band Signalling	Q.Sup47	11-2003	
Q.Sup50 03-2004 Technical Report TRQ.2145: Requirements for a Narrow-band Signalling	Q.Sup48	03-2004	
	Q.Sup49	03-2004	
	Q.Sup50	03-2004	

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Series R: Telegraph transmission

Number	Approval Date	Recommendation Title	Status
		Telegraph transmission	
R.2	11-1988	Element error rate	
R.4	11-1988	Methods for the separate measurements of the degrees of various types of telegraph distortion	
R.5	03-1993	Observation conditions recommended for routine distortion measurements on international telegraph circuits	
R.9	03-1993	How the laws governing distribution of distortion should be arrived at	
R.11	03-1993	Calculation of the degree of distortion of a telegraph circuit in terms of the degrees of distortion of the component links	
R.20	11-1988	Telegraph modem for subscriber lines	
R.21	08-1996	9600 bit/s modem standardized for use in the telegraph TDM system	
R.22	08-1996	Data over voice 19 200 bit/s modem standardized for use on telephone network subscriber lines	
R.30	11-1988	Transmission characteristic for international VFT links	
R.31	11-1988	Standardization of AMVFT systems for a modulation rate of 50 bauds	
R.35	11-1988	Standardization of FMVFT systems for a modulation rate of 50 bauds	
R.35bis	11-1988	50-baud wideband VFT systems	
R.36	11-1988	Coexistence of 50-baud/120-Hz channels, 100-baud/240-Hz channels, 200-baud/360-Hz or 480-Hz channels on the same voice-frequency telegraph system	
R.37	11-1988	Standardization of FMVFT systems for a modulation rate of 100 bauds	
R.38 A	11-1988	Standardization of FMVFT system for a modulation rate of 200 bauds with channels spaced at 480 Hz	
R.38B	11-1988	Standardization of FMVFT systems for a modulation rate of 200 bauds with channels spaced at 360 Hz usable on long intercontinental bearer circuits generally used with a 3-kHz spacing	
R.39	11-1988	Voice-frequency telegraphy on radio circuits	
R.40	11-1988	Coexistence in the same cable of telephony and super-telephone telegraphy	
R.43	11-1988	Simultaneous communication by telephone and telegraph on a telephone-type circuit	
R.44	11-1988	6-unit synchronous time-division 2-3-channel multiplex telegraph system for use over FMVFT channels spaced at 120 Hz for connection to standardized teleprinter networks	
R.49	11-1988	Interband telegraphy over open-wire 3-channel carrier systems	
R.50	11-1988	Tolerable limits for the degree of isochronous distortion of code- independent 50-baud telegraph circuits	

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R.	51	11-1988	Standardized text for distortion testing of the code-independent elements of a complete circuit
R.	51bis	11-1988	Standardized text for testing the elements of a complete circuit
R.	52	11-1988	Standardization of international texts for the measurement of the margin of start-stop equipment
R.	53	11-1988	Permissible limits for the degree of distortion on an international 50-baud/120-Hz VFT channel (frequency and amplitude modulation)
R.ŧ	54	03-1993	Conventional degree of distortion tolerable for standardized start-stop 50-baud systems
R.	55	03-1993	Conventional degree of distortion
R.5	56	03-1993	Telegraph distortion limits to be quoted in Recommendations for equipment and transmission plans
R.ŧ	57	11-1988	Standard limits of transmission quality for planning code-independent international point-to-point telegraph communications and switched networks using 50-baud start-stop equipment
R.	58	11-1988	Standard limits of transmission quality for the gentex and telex networks
R.	58bis	11-1988	Limits on signal transfer delay for telegraph, telex and gentex networks
R.ŧ	59	11-1988	Interface requirements for 50-baud start-stop telegraph transmission in the maritime mobile satellite service
R.6	60	11-1988	Conditions to be fulfilled by regenerative repeaters for start-stop signals of International Telegraph Alphabet No. 2
R.6	62	11-1988	Siting of regenerative repeaters in international telex circuits
R.7	70	11-1988	Designation of international telegraph circuits
R.	70bis	11-1988	Numbering of international VFT channels
R.7	71	11-1988	Organization of the maintenance of international telegraph circuits
R.7	72	11-1988	Periodicity of maintenance measurements to be carried out on the channels of international VFT systems
R.7	73	11-1988	Maintenance measurements to be carried out on VFT systems
R.7	74	11-1988	Choice of type of telegraph distortion-measuring equipment
R.7	75	11-1988	Maintenance measurements on code-independent international sections of international telegraph circuits
R.7	75bis	11-1988	Maintenance measurements of character error rate on international sections of international telegraph circuits
R.7	76	11-1988	Reserve channels for maintenance measurements on channels of international VFT systems
R.7	77	11-1988	Use of bearer circuits for voice-frequency telegraphy
R.7	78	11-1988	Pilot channel for AMVFT systems
R.7	79	11-1988	Automatic tests of transmission quality on telegraph circuits between switching centres
R.8	80	11-1988	Causes of disturbances to signals in VFT channels and their effect on telegraph distortion

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R.81	11-1988	Maximum acceptable limit for the duration of interruption of telegraph channels arising from failure of the normal power supplies
R.82	11-1988	Appearance of false calling and clearing signals in circuits operated by switched teleprinter services
R.83	11-1988	Changes of level and interruptions in VFT channels
R.90	11-1988	Organization for locating and clearing faults in international telegraph switched networks
R.91	11-1988	General maintenance aspects for the maritime satellite telex service
R.100	03-1993	Transmission characteristics of international TDM links
R.101	03-1993	Code and speed dependent TDM system for anisochronous telegraph and data transmission using bit interleaving
R.102	03-1993	4800 bit/s code and speed dependent and hybrid TDM systems for anisochronous telegraph and data transmission using bit interleaving
R.103	11-1988	Code and speed-dependent TDM 600 bit/s system for use in point-to-point or branch-line muldex configurations
R.105	03-1993	Duplex muldex concentrator, connecting a group of gentex and telex subscribers to a telegraph exchange by assigning virtual channels to time slots of a bit-interleaved TDM system
R.106	08-1995	Muldex unit for telegraph and low speed data transmission using TDM bit interleaving with an aggregate bit rate higher than 4800 bit/s
R.111	03-1993	Code and speed independent TDM system for anisochronous telegraph and data transmission
R.112	03-1993	TDM hybrid system for anisochronous telegraph and data transmission using bit interleaving
R.113	03-1993	Combined muldex for telegraphy and synchronous data transmission
R.114	03-1993	Numbering of international TDM channels
R.115	03-1993	Maintenance loops for TDM-systems
R.116	11-1988	Maintenance tests to be carried out on international TDM systems
R.117	03-1993	End-to-end error performance for telegraph, telex and gentex connections involving regenerative equipment
R.118	03-1993	Performance and availability monitoring in regenerative TDM
R.120	11-1988	Tolerable limits for the degree of isochronous distortion of code- independent telegraph circuits operating at modulation rates of 75, 100 and 200 bauds
R.121	11-1988	Standard limits of transmission quality for start-stop user classes of service 1 and 2 on anisochronous data networks
R.122	11-1988	Summary of transmission plans for rates up to 300 bauds
R.140	11-1988	Definitions of essential technical terms in the field of telegraph transmission
R.150	11-1988	Automatic protection switching of dual diversity bearers

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Series S: Telegraph services terminal equipment

Number	Approval Date	Recommendation Title	Status
		Telegraph services terminal equipment	
S.1	03-1993	International Telegraph Alphabet No. 2	
S.2	11-1988	Coding scheme using International Telegraph Alphabet No. 2 (ITA2) to allow the transmission of capital and small letters	
S.3	11-1988	Transmission characteristics of the local end with its termination (ITA2)	
S.4	03-1993	Special use of certain characters of the International Telegraph Alphabet No. 2	
S.5	11-1988	Standardization of page-printing start-stop equipment and cooperation between page-printing and tape-printing start-stop equipment (ITA2)	
S.6	11-1988	Characteristics of answerback units (ITA2)	
S.7	11-1988	Control of teleprinter motors	
S.8	03-1993	Intercontinental standardization of the modulation rate of start-stop apparatus and of the use of combination No. 4 in figure-shift	
S.9	11-1988	Switching equipment of start-stop apparatus	
S.10	11-1988	Transmission at reduced character transfer rate over a standardized 50-baud telegraph channel	
S.11	11-1988	Use of start-stop reperforating equipment for perforated tape retransmission	
S.12	11-1988	Conditions that must be satisfied by synchronous systems operating in connection with standard 50-baud teleprinter circuits	
S.13	11-1988	Use on radio circuits of 7-unit synchronous systems giving error correction by automatic repetition	
S.14	11-1988	Suppression of unwanted reception in radiotelegraph multi-destination teleprinter systems	
S.15	11-1988	Use of the telex network for data transmission at 50 bauds	
S.16	03-1993	Connection to the telex network of an automatic terminal using a V.24 DCE/DTE interface	
S.17	11-1988	Answer-back unit simulators	
S.18	11-1988	Conversion between International Telegraph Alphabet No. 2 and International Alphabet No. 5	
S.19	11-1988	Calling and answering in the telex network with automatic terminal equipment	
S.20	03-1993	Automatic clearing procedure for a telex terminal	
S.21	03-1993	Use of display screens in telex machines	
S.22	03-1993	"Conversation impossible" and or pre-recorded message in response to J/BELL signals from a telex terminal	

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S.23	03-1993	Automatic request of the answerback of the terminal of the calling party, by the telex terminal of the called party or by the international network
S.30	11-1988	Standardization of basic model page-printing machine using International Alphabet No. 5
S.31	11-1988	Transmission characteristics for start-stop data terminal equipment using International Alphabet No. 5
S.32	11-1988	Answer-back units for 200- and 300-baud start-stop machines in accordance with Recommendation S.30
S.33	03-1993	Alphabets and presentation characteristics for the intex service
S.34	03-1993	Intex terminals – Requirements to effect interworking with the international telex service
S.35	03-1993	Answerback coding for the Intex service
S.36	07-1996	Intex and similar services – Terminal requirements to effect interworking between terminals operating at different speeds
S.140	11-1988	Definitions of essential technical terms relating to apparatus for alphabetic telegraphy
S.supp1	11-1988	<a name="S2-3">Minimal specifications for the bilingual (arabic/latin) teleprinter</a>

Recommendation count: 32

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Series T: Terminals for telematic services

Number	Approval Date	Recommendation Title	Status
		Terminals for telematic services	
T.0	07-1996	Classification of facsimile terminals for document transmission over the public networks	
T.1	11-1988	Standardization of phototelegraph apparatus	
T.4	07-2003	Standardization of Group 3 facsimile terminals for document transmission	
G.511	02-1998	Test methodology for Group 3 facsimile processing equipment in the Public Switched Telephone Network	
T.6	11-1988	Facsimile coding schemes and coding control functions for Group 4 facsimile apparatus	
T.10	11-1988	Document facsimile transmissions on leased telephone-type circuits	
T.10bis	11-1988	Document facsimile transmissions in the general switched telephone network	
T.22	03-1993	Standardized test charts for document facsimile transmissions	
T.23	04-1994	Standardized colour test chart for document facsimile transmissions	
T.24	06-1998	Standardized digitized image set	Available only in PDF.
T.24 (1998) Amend.1	02-2000		Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
T.30	07-2003	Procedures for document facsimile transmission in the general switched telephone network	
T.30 (2003) Erratum 1	04-2004		
T.31	08-1995	Asynchronous facsimile DCE control – Service Class 1	
T.31 (1995) Amendment 1	07-1996	Annex B: Procedure for Service Class 1 support of V.34 modems	
T.32	08-1995	Asynchronous facsimile DCE control – Service Class 2	
T.32 (1995) Amendment 1	07-1996		
T.33	07-1996	Facsimile routing utilizing the subaddress	
T.35	02-2000	Procedure for the allocation of ITU-T defined codes for non-standard facilities	
T.36	07-1997	Security capabilities for use with Group 3 facsimile terminals	
T.36 (1997) Amendment 1	04-1999		

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T.37	06-1998	Procedures for the transfer of facsimile data via store-and-forward on the Internet	
T.37 (1998) Amendment 1	09-1999	Full Mode	
T.37 (1998) Amendment 2	03-2001	Replacement of reference RFC 2531 by RFC 2879	
T.37 (1998) Amendment 3	11-2002	Support of image/tiff and image/tiff-fx MIME content-types	
T.38	04-2004	Procedures for real-time Group 3 facsimile communication over IP networks	
T.38 (2004) Amendment 1	01-2005	Addition of vendor information in SIP/SDP call setup, corrections to Annex C and Annex D, and enhanced implementation guidelines	Pre-published.
T.39	10-1997	Application profiles for simultaneous voice and facsimile terminals	
T.42	07-2003	Continuous-tone colour representation method for facsimile	
T.42 (2003) Corrigendum 1	03-2004		
T.43	07-1997	Colour and gray-scale image representations using lossless coding scheme for facsimile	
T.43 (1997) Amendment 1	02-2000	Accommodation of new and future Resolutions	
T.44	01-2005	Mixed Raster Content (MRC)	Pre-published.
T.45	02-2000	Run-length Colour Encoding	
T.50	09-1992	International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) – Information technology – 7-bit coded character set for information interchange	
T.51	09-1992	Latin based coded character sets for telematic services	
T.51 (1992) Amendment 1	08-1995		
T.52	03-1993	Non-latin coded character sets for telematic services	
T.52 (1993) Amendment 1	10-1996		
T.53	04-1994	Character coded control functions for telematic services	
T.62	03-1993	Control procedures for teletex and Group 4 facsimile services	
T.62bis	03-1993	Control procedures for teletex and G4 facsimile services based on Recommendations X.215 and X.225	
T.66	03-2002	Facsimile code points for use with Recommendations V.8 and V.8 bis	
T.70	03-1993	Network-independent basic transport service for the telematic services	
T.71	11-1988	Link access protocol balanced (LAPB) extended for half-duplex physical level facility	
T.80	09-1992	Common components for image compression and communication – Basic principles	

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T.81	09-1992	Information technology – Digital compression and coding of continuous- tone still images – Requirements and guidelines
T.81 (1992) Corrigendum 1	01-2004	Patent information update
T.82	03-1993	Information technology – Coded representation of picture and audio information – Progressive bi-level image compression
T.82 (1993) Technical Cor.1	03-1995	
T.82 (1993) Technical Cor.2	03-2001	
T.83	11-1994	Information technology – Digital compression and coding of continuous-tone still images: Compliance testing
T.84	07-1996	Information technology – Digital compression and coding of continuous-tone still images: Extensions
T.84 (1996) Amendment 1	04-1999	Provisions to allow registration of new compression types and versions in the SPIFF header
T.85	08-1995	Application profile for Recommendation T.82 – Progressive bi-level image compression (JBIG coding scheme) for facsimile apparatus
T.85 (1995) Amendment 1	10-1996	
T.85 (1995) Corrigendum 1	02-1997	
T.85 (1995) Amendment 2	10-1997	
T.86	06-1998	Information technology – Digital compression and coding of continuous- tone still images: Registration of JPEG Profiles, SPIFF Profiles, SPIFF Tags, SPIFF colour Spaces, APPn Markers, SPIFF Compression types and Registration authorities (REGAUT)
T.87	06-1998	Information technology – Lossless and near-lossless compression of continuous-tone still images – Baseline
T.88	02-2000	Information technology – Lossy/lossless coding of bi-level images
T.88 (2000) Amendment 1	06-2003	Encoder
T.88 (2000) Amendment 2	06-2003	Extension of adaptive templates for halftone coding
T.88 Amendment 1 Erratum 1	12-2004	
T.89	09-2001	Application profiles for Recommendation T.88 – Lossy/lossless coding of bi-level images (JBIG2) for facsimile
T.90	02-1992	Characteristics and protocols for terminals for telematic services in ISDN
T.90 (1992) Amendment 1	11-1994	
T.90 (1992) Amendment 2	07-1996	
T.90 (1992) Amendment 3	06-1998	Cause value for a G4 fax fallback

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T.100	11-1988	International information exchange for interactive Videotex
T.101	11-1994	International interworking for Videotex services
T.102	03-1993	Syntax-based Videotex end-to-end protocols for the circuit mode ISDN
T.103	03-1993	Syntax-based Videotex end-to-end protocols for the packet mode ISDN
T.104	03-1993	Packet mode access for syntax-based Videotex via PSTN
T.105	11-1994	Syntax-based Videotex application layer protocol
T.106	03-1993	Framework of videotex terminal protocols
T.107	08-1995	Enhanced man machine interface for videotex and other retrieval services (VEMMI)
T.120	07-1996	Data protocols for multimedia conferencing
T.120 Annex C	02-1998	Lightweight profiles for the T.120 architecture
T.121	07-1996	Generic application template
T.122	02-1998	Multipoint communication service – Service definition
T.123	05-1999	Network-specific data protocol stacks for multimedia conferencing
T.124	02-1998	Generic Conference Control
T.125	02-1998	Multipoint communication service protocol specification
T.126	07-1997	Multipoint still image and annotation protocol
T.127	08-1995	Multipoint binary file transfer protocol
T.128	02-1998	Multipoint application sharing
T.134	02-1998	Text chat application entity
T.135	02-1998	User-to-reservation system transactions within T.120 conferences
T.136	05-1999	Remote device control application protocol
T.137	02-2000	Virtual meeting room management for multimedia conferencing audiovisual control
T.140	02-1998	Protocol for multimedia application text conversation
T.140 Addendum 1	02-2000	
T.150	11-1988	Telewriting terminal equipment
T.170	02-1998	Framework of the T.170-Series of Recommendations
T.171	10-1996	Protocols for interactive audiovisual services: Coded representation of multimedia and hypermedia objects
T.172	02-1998	MHEG-5 – Support for base-level interactive applications
T.173	07-1997	MHEG-3 script interchange representation

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T.174	10-1996	Application programming interface (API) for MHEG-1
T.175	02-1998	Application programming interface (API) for MHEG-5
T.176	02-1998	Application programming interface (API) for digital storage media command and control (DSM-CC)
T.180	06-1998	Homogeneous access mechanism to communication services
T.190	08-1995	Cooperative Document Handling (CDH) – Framework and basic services
T.191	07-1996	Cooperative document handling (CDH) – Joint synchronous editing (point-to-point)
T.192	06-1998	Cooperative document handling – Complex services: Joint synchronous editing and joint document presentation/viewing
T.300	11-1988	General principles of telematic interworking
T.330	11-1988	Telematic access to interpersonal messaging system
T.351	11-1988	Imaging process of character information on facsimile apparatus
T.390	11-1988	Teletex requirements for interworking with the telex service
T.411	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Introduction and general principles
T.411 (1993) Technical Cor. 1	10-1997	
T.412	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Document structures
T.412 (1993) Technical Cor. 1	10-1997	
T.412 (1993) Technical Cor. 2	10-1997	
T.413	11-1994	Information technology – Open Document Architecture (ODA) and interchange format: Abstract interface for the manipulation of ODA documents
T.414	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Document profile
T.414 (1993) Technical Cor. 1	10-1997	
T.414 (1993) Technical Cor. 2	10-1997	
T.415	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Open document interchange format (ODIF)
T.415 (1993) Technical Cor. 1	10-1997	
T.415 (1993) Technical Cor. 2	10-1997	
T.416	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Character content architectures
T.416 (1993) Technical Cor. 1	10-1997	

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T.417	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Raster graphics content architectures
T.417 (1993) Technical Cor. 1	10-1997	
T.417 (1993) Amendment 1	10-1997	
T.417 (1993) Amendment 2	02-2000	
T.418	03-1993	Information technology – Open Document Architecture (ODA) and interchange format: Geometric graphics content architecture
T.419	08-1995	Information technology – Open Document Architecture (ODA) and interchange format: Audio content architectures
T.421	11-1994	Information technology – Open Document Architecture (ODA) and interchange format: Tabular structures and tabular layout
T.422	08-1995	Information technology – Open Document Architecture (ODA) and interchange format: Identification of document fragments
T.424	07-1996	Information technology – Open Document Architecture (ODA) and interchange format: Temporal relationships and non-linear structures
T.431	09-1992	Document Transfer And Manipulation (DTAM) – Services and protocols – Introduction and general principles
T.432	09-1992	Document Transfer And Manipulation (DTAM) – Services and protocols – Service definition
T.432 (1992) Amendment 1	08-1995	Revisions of T.432 to support G4 colour and file transfer
T.433	09-1992	Document Transfer And Manipulation (DTAM) – Services and protocols – Protocol specification
T.433 (1992) Amendment 1	08-1995	Revisions of T.433 to support G4 colour and file transfer
T.434	04-1999	Binary file transfer format for the telematic services
T.435	08-1995	Document Transfer And Manipulation (DTAM) – Services and protocols – Abstract service definition and procedures for confirmed document manipulation
T.436	08-1995	Document Transfer and Manipulation (DTAM) – Services and protocols – Protocol specifications for confirmed document manipulation
T.441	11-1988	Document Transfer And Manipulation (DTAM) - Operational structure
T.501	03-1993	Document application profile MM for the interchange of formatted mixed mode documents
T.502	11-1994	Document application profile PM-11 for the interchange of simple structure, character content documents in processable and formatted forms
T.503	02-2000	Document application profile for the interchange of Group 4 facsimile documents
T.504	03-1993	Document application profile for videotex interworking
T.505	11-1994	Document application profile PM-26 for the interchange of enhanced structure, mixed content documents in processable and formatted forms

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T.506	08-1993	Document application profile PM-36 for the interchange of extended document structures and mixed content documents in processable and formatted forms	
T.510	03-1993	General overview of the T.510-Series Recommendations	
T.521	11-1994	Communication application profile BT0 for document bulk transfer based on the session service	
T.521 (1994) Amendment 1	08-1995		
T.522	09-1992	Communication application profile BT1 for document bulk transfer	
T.523	03-1993	Communication application profile DM-1 for videotex interworking	
T.541	03-1993	Operational application profile for videotex interworking	
T.561	11-1988	Terminal characteristics for mixed mode of operation MM	
T.562	11-1988	Terminal characteristics for teletex processable mode PM.1	
T.563	10-1996	Terminal characteristics for Group 4 facsimile apparatus	
T.563 (1996) Amendment 1	07-1997		
T.563 (1996) Amendment 2	10-1997	Annex C – T.30 frames for G4 facsimile	
T.563 (1996) Corrigendum 1	06-1998		
T.563 (1996) Amendment 3	04-1999		
T.564	03-1993	Gateway characteristics for videotex interworking	
T.571	09-1992	Terminal characteristics for the telematic file transfer within the teletex service	
T.611	11-1994	Programming Communication Interface (PCI) APPLI/COM for facsimile Group 3, facsimile Group 4, teletex, telex, E-mail and file transfer services	
T.800	08-2002	Information technology – JPEG 2000 image coding system: Core coding system	
T.801	08-2002	Information technology – JPEG 2000 image coding system: Extensions	
T.801 (2002) Corrigendum 3	01-2005		
T.802	01-2005	Information technology – JPEG 2000 image coding system: Motion JPEG 2000	Pre-published.
T.803	11-2002	Information technology – JPEG 2000 image coding system: Conformance testing	Available only in MS Word.
T.804	08-2002	Information technology – JPEG 2000 image coding system: Reference software	Available only in MS Word.
T.808	01-2005	Information technology – JPEG 2000 image coding system: Interactivity tools, APIs and protocols	Pre-published.
T.870	03-2002	Information technology – Lossless and near-lossless compression of continuous-tone still images: Extensions	Available only in MS Word.

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Series U: Telegraph switching

Number	Approval Date	Recommendation Title	Status
		Telegraph switching	
J.1	03-1993	Signalling conditions to be applied in the international telex service	
J.2	11-1988	Standardization of dials and dial pulse generators for the international telex service	
J.3	11-1988	Arrangements in switching equipment to minimize the effects of false calling signals	
J.4	11-1988	Exchange of information regarding signals destined to be used over international circuits concerned with switched teleprinter networks	
J.5	11-1988	Requirements to be met by regenerative repeaters in international connections	
J.6	11-1988	Prevention of fraudulent transit traffic in the fully automatic international telex service	
J.7	03-1993	Numbering schemes for automatic switching networks	
J.8	11-1988	Hypothetical reference connections for telex and gentex networks	
J.10	03-1993	Equipment of an international telex position	
J.11	03-1993	Telex and gentex signalling on intercontinental circuits used for intercontinental automatic transit traffic (type C signalling)	
J.12	03-1993	Terminal and transit control signalling system for telex and similar services on international circuits (type D signalling)	
J.15	03-1993	Interworking rules for international signalling systems according to Recommendations U.1, U.11 and U.12	
J.20	11-1988	Telex and gentex signalling on radio channels (synchronous 7-unit systems affording error correction by automatic repetition)	
J.21	11-1988	Operator recall on a telex call set up on a radiotelegraph circuit	
J.22	11-1988	Signals indicating delay in transmission on calls set up by means of synchronous systems with automatic error correction by repetition	
J.23	11-1988	Use of radiotelegraph circuits with ARQ equipment for fully automatic telex calls charged on the basis of elapsed time	
J.24	11-1988	Requirements for telex and gentex operation to be met by synchronous multiplex equipment described in Recommendation R.44	
J.25	11-1988	Requirements for telex and gentex operation to be met by code- and speed-dependent TDM systems conforming to Recommendation R.101	
J.30	11-1988	Signalling conditions for use in the international gentex network	
J.31	11-1988	Prevention of connection to faulty stations and/or station lines in the gentex service	
J.40	03-1993	Reactions by automatic terminals connected to the telex network in the event of ineffective call attempts or signalling incidents	
J.41	11-1988	Changed address interception and call redirection in the telex service	

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U.43	11-1988	Follow-on calls
U.44	11-1988	Multi-address calls in real time for broadcast purposes in the international telex service
U.45	03-1993	Response to the not-ready condition of the telex terminal
U.46	03-1993	Interruption of automatic transmission and flow control in the international telex service
U.60	11-1988	General requirements to be met in interfacing the international telex network with maritime satellite systems
U.61	03-1993	Detailed requirements to be met in interfacing the international telex network with maritime satellite systems
U.62	03-1993	General requirements to be met in interfacing the international telex network with the fully automated maritime VHF/UHF radio system
U.63	11-1988	General requirements to be met in interfacing the international telex network with the maritime "direct printing" system
U.70	11-1988	Telex service signals for telex to teletex interworking
U.74	11-1988	Extraction of telex selection information from a calling telex answerback
U.75	03-1993	Automatic called telex answerback check
U.80	03-1993	International telex store and forward access from a telex subscriber
U.81	10-1996	International telex store-and-forward – Delivery to a telex subscriber
U.101	03-1993	Signalling systems for the Intex service (types E and F signalling)
U.102	07-1996	Intex and similar services – Network requirements to effect interworking between terminals operating at different speeds
U.140	11-1988	Definitions of essential technical terms relating to telegraph switching and signalling
U.200	03-1993	The international telex service – General technical requirements for interworking
U.201	03-1993	Interworking between the teletex service and the international telex service
U.202	03-1993	Technical requirements to be met in providing the international telex service within an integrated services digital network
U.203	03-1993	Technical requirements to be met when providing real-time bothway communications between terminals of the international telex service and data terminal equipments on a PSPDN or via the PSTN
U.204	03-1993	Interworking between the international telex service and the public interpersonal messaging service
U.205	03-1993	Store-and-retrieve facility for the delivery of messages from a terminal of the international telex service to a data terminal equipment which connects to a packet-switched public data network over the public switched telephone network
U.206	03-1993	Technical requirements for interworking between the international telex service and the videotex service
U.207	03-1993	Technical requirements to be met for the transfer of messages between terminals of the international telex service and Group 3 facsimile terminals connected to the PSTN

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U.208	10-1996	The international telex service – Interworking with the INMARSAT C system using one-stage selection
U.210	03-1993	Intex service network requirements to effect interworking with the international telex service
U.220	03-1993	The international telex service – Technical requirements for a status enquiry function in an interworking scenario

Recommendation count: 49

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Series V: Data communication over the telephone network

Number	Approval Date	Recommendation Title	Status
		Data communication over the telephone network	
V.1	11-1988	Equivalence between binary notation symbols and the significant conditions of a two-condition code	
V.2	11-1988	Power levels for data transmission over telephone lines	
V.4	11-1988	General structure of signals of International Alphabet No. 5 code for character oriented data transmission over public telephone networks	
V.7	11-1988	Definitions of terms concerning data communication over the telephone network	
V.8	11-2000	Procedures for starting sessions of data transmission over the public switched telephone network	
V.8bis	11-2000	Procedures for the identification and selection of common modes of operation between data circuit-terminating equipments (DCEs) and between data terminal equipments (DTEs) over the public switched telephone network and on leased point-to-point telephone-t	
V.10	03-1993	Electrical characteristics for unbalanced double-current interchange circuits operating at data signalling rates nominally up to 100 kbit/s	
V.11	10-1996	Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s	
V.12	08-1995	Electrical characteristics for balanced double-current interchange circuits for interfaces with data signalling rates up to 52 Mbit/s	
V.13	03-1993	Simulated carrier control	
V.14	03-1993	Transmission of start-stop characters over synchronous bearer channels	
V.14 (1993) Corrigendum 1	09-1998		
V.15	11-1988	Use of acoustic coupling for data transmission	
V.16	11-1988	Medical analogue data transmission modems	
V.17	02-1991	A 2-wire modem for facsimile applications with rates up to 14 400 bit/s	
V.17 (1991) Corrigendum 1	09-1998		
V.18	11-2000	Operational and interworking requirements for DCEs operating in the text telephone mode	
V.18 (2000) Amendment 1	11-2002	Harmonization with ANSI TIA/EIA-825 (2000) text phones	
V.19	11-1988	Modems for parallel data transmission using telephone signalling frequencies	
V.21	11-1988	300 bits per second duplex modem standardized for use in the general switched telephone network	
V.22	11-1988	1200 bits per second duplex modem standardized for use in the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits	

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V.22bis	11-1988	2400 bits per second duplex modem using the frequency division technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits
V.23	11-1988	600/1200-baud modem standardized for use in the general switched telephone network
V.24	02-2000	List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)
V.25	10-1996	Automatic answering equipment and general procedures for automatic calling equipment on the general switched telephone network including procedures for disabling of echo control devices for both manually and automatically established calls
V.25 (1996) Corrigendum 1	07-2001	
V.25bis	10-1996	Synchronous and asynchronous automatic dialling procedures on switched networks
V.26	11-1988	2400 bits per second modem standardized for use on 4-wire leased telephone-type circuits
V.26bis	11-1988	2400/1200 bits per second modem standardized for use in the general switched telephone network
V.26ter	11-1988	2400 bits per second duplex modem using the echo cancellation technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits
V.27	11-1988	4800 bits per second modem with manual equalizer standardized for use on leased telephone-type circuits
V.27bis	11-1988	4800/2400 bits per second modem with automatic equalizer standardized for use on leased telephone-type circuits
V.27ter	11-1988	4800/2400 bits per second modem standardized for use in the general switched telephone network
V.28	03-1993	Electrical characteristics for unbalanced double-current interchange circuits
V.29	11-1988	9600 bits per second modem standardized for use on point-to-point 4-wire leased telephone-type circuits
V.31	11-1988	Electrical characteristics for single-current interchange circuits controlled by contact closure
V.31bis	11-1988	Electrical characteristics for single-current interchange circuits using optocouplers
V.32	03-1993	A family of 2-wire, duplex modems operating at data signalling rates of up to 9600 bit/s for use on the general switched telephone network and on leased telephone-type circuits
V.32bis	02-1991	A duplex modem operating at data signalling rates of up to 14 400 bit/s for use on the general switched telephone network and on leased point-to-point 2-wire telephone-type circuits
V.33	11-1988	14 400 bits per second modem standardized for use on point-to-point 4-wire leased telephone-type circuits
V.34	02-1998	A modem operating at data signalling rates of up to 33 600 bit/s for use on the general switched telephone network and on leased point-to-point 2-wire telephone-type circuits
V.36	11-1988	Modems for synchronous data transmission using 60-108 kHz group band circuits

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V.37	11-1988	Synchronous data transmission at a data signalling rate higher than 72 kbit/s using 60-108 kHz group band circuits	
V.38	10-1996	A 48/56/64 kbit/s data circuit-terminating equipment standardized for use on digital point-to-point leased circuits	
V.41	11-1988	Code-independent error-control system	
V.42	03-2002	Error-correcting procedures for DCEs using asynchronous-to- synchronous conversion	
V.42 (2002) Corrigendum 1	07-2003		
V.42bis	01-1990	Data compression procedures for data circuit-terminating equipment (DCE) using error correction procedures	
V.43	02-1998	Data flow control	
V.44	11-2000	Data compression procedures	
V.44 (2000) Corrigendum 1	03-2002		
V.50	11-1988	Standard limits for transmission quality of data transmission	
M.729	11-1988	Organization of the maintenance of international public switched telephone circuits used for data transmission	
V.53	11-1988	Limits for the maintenance of telephone-type circuits used for data transmission	
V.54	11-1988	Loop test devices for modems	
0.71	11-1988	Impulsive noise measuring equipment for telephone-type circuits	
V.56	11-1988	Comparative tests of modems for use over telephone-type circuits	
V.56bis	08-1995	Network transmission model for evaluating modem performance over 2-wire voice grade connections	
V.56ter	08-1996	Test procedure for evaluation of 2-wire 4 kHz voiceband duplex modems	
V.58	09-1994	Management information model for V-Series DCEs	
V.59	11-2000	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCEs	
V.59 (2000) Corrigendum 1	07-2001		
V.59 (2000) Corrigendum 2	03-2002		
V.61	08-1996	A simultaneous voice plus data modem, operating at a voice plus data signalling rate of 4800 bit/s, with optional automatic switching to data-only signalling rates of up to 14400 bit/s, for use on the General Switched Telephone Network and on leased point	
V.61 (1996) Corrigendum 1	01-2005		Pre-published.
V.70	08-1996	Procedures for the simultaneous transmission of data and digitally encoded voice signals over the GSTN, or over 2-wire leased point-to-point telephone type circuits	

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V.70 (1996) Corrigendum 1	01-2005		Pre-published.
V.75	08-1996	DSVD terminal control procedures	
V.75 (1996) Corrigendum 1	01-2005		Pre-published.
V.75 Appendix II	02-1998	Session establishment using V.75/H.245 procedures	
V.76	08-1996	Generic multiplexer using V.42 LAPM-based procedures	
V.76 (1996) Corrigendum 1	01-2005		Pre-published.
V.80	08-1996	In-band DCE control and synchronous data modes for asynchronous DTE	
V.80 (1996) Amendment 1	07-2001	Additional data signalling rate codes in support of cellular systems	
V.90	09-1998	A digital modem and analogue modem pair for use on the Public Switched Telephone Network (PSTN) at data signalling rates of up to 56 000 bit/s downstream and up to 33 600 bit/s upstream	
V.91	05-1999	A digital modem operating at data signalling rates of up to 64 000 bit/s for use on a 4-wire circuit switched connection and on leased point-to-point 4-wire digital circuits	
V.91 (1999) Corrigendum 1	07-2001		
V.92	11-2000	Enhancements to Recommendation V.90	
V.92 (2000) Amendment 1	07-2001	Update of Tables 18, 19, 31, 32, Figure 20 and Clauses 8.6.6, 8.7.6, 9.10.1, and 9.11	
V.92 (2000) Amendment 2	03-2002	New interaction facilities for error-correcting procedures	
V.92 (2000) Corrigendum 1	07-2003		
V.100	11-1988	Interconnection between public data networks (PDNs) and the public switched telephone networks (PSTN)	
V.110	02-2000	Support by an ISDN of data terminal equipments with V-series type interfaces	
V.120	10-1996	Support by an ISDN of data terminal equipment with V-series type interfaces with provision for statistical multiplexing	
V.120 (1996) Corrigendum 1	05-1999		
V.130	08-1995	ISDN terminal adaptor framework	
V.140	01-2005	Procedures for establishing communication between two multiprotocol audiovisual terminals using digital channels at a multiple of 64 or 56 kbit/s	Pre-published.
V.150.0	01-2003	Modem-over-IP networks: Foundation	
V.150.1	01-2003	Modem-over-IP networks: Procedures for the end-to-end connection of V-series DCEs	
V.150.1 (2003) Corrigendum 1	07-2003		Pre-published.

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V.150.1 (2003) Corrigendum 2	03-2004		Pre-published.
V.150.1 (2003) Amendment 1	01-2005	Modification to SSE reason identifier codes to support voice band data and text relay	Pre-published.
V.152	01-2005	Procedures for supporting voice-band data over IP networks	Pre-published.
V.230	11-1988	General data communications interface layer 1 specification	
V.250	07-2003	Serial asynchronous automatic dialling and control	
V.250 Supplement 1	06-2001	Various extensions to V.250 basic command set	
V.251	08-1996	Procedure for DTE-controlled call negotiation	
V.251 (1996) Erratum 1	10-2003		
V.252	02-1998	Procedure for control of V.70 and H.324 terminals by a DTE	
V.253	02-1998	Control of voice-related functions in a DCE by an asynchronous DTE	
V.300	07-1999	A 128 (144) kbit/s data circuit-terminating equipment standardized for use on digital point-to-point leased circuits	

Recommendation count: 101

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Series X: Data networks, open system communications and security

Number	Approval Date	Recommendation Title	Status
		Data networks, open system communications and security	
X.1	03-2000	International user classes of service in, and categories of access to, public data networks and Integrated Services Digital Networks (ISDNs)	
X.2	03-2000	International data transmission services and optional user facilities in public data networks and ISDNs	
X.3	03-2000	Packet Assembly/Disassembly facility (PAD) in a public data network	
X.4	11-1988	General structure of signals of International Alphabet No. 5 code for character oriented data transmission over public data networks	
X.5	10-1996	Facsimile Packet Assembly/Disassembly facility (FPAD) in a public data network	
X.6	08-1997	Multicast service definition	
X.6 (1997) Amendment 1	03-2000	Frame relay PVC multicast service definition	
X.7	04-2004	Technical characteristics of data transmission services	
X.8	07-1994	Multi-aspect PAD (MAP) framework and service definition	
X.20	11-1988	Interface between Data Terminal Equipment (DTE) and Data Circuit- terminating Equipment (DCE) for start-stop transmission services on public data networks	
X.20bis	11-1988	Use on public data networks of Data Terminal Equipment (DTE) which is designed for interfacing to asynchronous duplex V-Series modems	
X.21	09-1992	Interface between Data Terminal Equipment and Data Circuit-terminating Equipment for synchronous operation on public data networks	
X.21bis	11-1988	Use on public data networks of Data Terminal Equipment (DTE) which is designed for interfacing to synchronous V-Series modems	
X.22	11-1988	Multiplex DTE/DCE interface for user classes 3-6	
X.24	11-1988	List of definitions for interchange circuits between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) on public data networks	
X.25	10-1996	Interface between Data Terminal Equipment (DTE) and Data Circuit- terminating Equipment (DCE) for terminals operating in the packet mode and connected to public data networks by dedicated circuit	
X.25 (1996) Corrigendum 1	09-1998		
V.10	03-1993	Electrical characteristics for unbalanced double-current interchange circuits operating at data signalling rates nominally up to 100 kbit/s	
V.11	10-1996	Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s	
X.28	12-1997	DTE/DCE interface for a start-stop mode Data Terminal Equipment accessing the Packet Assembly/Disassembly facility (PAD) in a public data network situated in the same country	

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X.28 (1997) Amendment 1	03-2000	Extensions of PAD parameter settings and PAD service signals
X.29	12-1997	Procedures for the exchange of control information and user data between a Packet Assembly/Disassembly (PAD) facility and a packet mode DTE or another PAD
X.30	03-1993	Support of X.21, X.21 bis and X.20 bis based Data Terminal Equipments (DTEs) by an Integrated Services Digital Network (ISDN)
X.31	11-1995	Support of packet mode terminal equipment by an ISDN
X.32	10-1996	Interface between Data terminal Equipment (DTE) and Data Circuit- terminating Equipment (DCE) for terminals operating in the packet mode and accessing a Packet-Switched Public Data Network through a public switched telephone network or an Integrated Servic
X.33	10-1996	Access to packet-switched data transmission services via frame relaying data transmission services
X.34	10-1996	Access to packet-switched data transmission services via B-ISDN
X.34 (1996) Corrigendum 1	03-2000	
X.35	11-1993	Interface between a PSPDN and a private PSDN which is based on X.25 procedures and enhancements to define a gateway function that is provided in the PSPDN
X.36	02-2003	Interface between Data Terminal Equipment (DTE) and Data Circuit- terminating Equipment (DCE) for public data networks providing frame relay data transmission service by dedicated circuit
X.37	04-1995	Encapsulation in X.25 packets of various protocols including frame relay
X.38	10-1996	G3 facsimile equipment/DCE interface for G3 facsimile equipment accessing the Facsimile Packet Assembly/Disassembly facility (FPAD) in a public data network situated in the same country
X.39	10-1996	Procedures for the exchange of control information and user data between a Facsimile Packet Assembly/Disassembly (FPAD) facility and a packet mode Data Terminal Equipment (DTE) or another FPAD
X.42	10-2003	Procedures and methods for accessing a public data network from a DTE operating under control of a generalized polling protocol
X.45	10-1996	Interface between data terminal equipment (DTE) and data circuit- terminating equipment (DCE) for terminals operating in the packet mode and connected to public data networks, designed for efficiency at higher speeds
X.46	09-1998	Access to FRDTS via B-ISDN
X.48	10-1996	Procedures for the provision of a basic multicast service for data terminal equipments (DTEs) using Recommendation X.25
X.49	10-1996	Procedures for the provision of an extended multicast service for data terminal equipments (DTEs) using Recommendation X.25
X.50	11-1988	Fundamental parameters of a multiplexing scheme for the international interface between synchronous data networks
X.50bis	11-1988	Fundamental parameters of a 48-kbit/s user data signalling rate transmission scheme for the international interface between synchronous data networks

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X.51	11-1988	Fundamental parameters of a multiplexing scheme for the international interface between synchronous data networks using 10-bit envelope structure
X.51bis	11-1988	Fundamental parameters of a 48-kbit/s user data signalling rate transmission scheme for the international interface between synchronous data networks using 10-bit envelope structure
X.52	11-1988	Method of encoding anisochronous signals into a synchronous user bearer
X.53	03-1993	Numbering of channels on international multiplex links at 64 kbit/s
X.54	11-1988	Allocation of channels on international multiplex links at 64 kbit/s
X.55	11-1988	Interface between synchronous data networks using a 6 + 2 envelope structure and single channel per carrier (SCPC) satellite channels
X.56	11-1988	Interface between synchronous data networks using an 8 + 2 envelope structure and single channel per carrier (SCPC) satellite channels
X.57	11-1988	Method of transmitting a single lower speed data channel on a 64 kbit/s data stream
X.58	11-1988	Fundamental parameters of a multiplexing scheme for the international interface between synchronous non-switched data networks using no envelope structure
X.60	11-1988	Common channel signalling for circuit-switched data applications
X.70	11-1988	Terminal and transit control signalling system for start-stop services on international circuits between anisochronous data networks
X.71	11-1988	Decentralized terminal and transit control signalling system on international circuits between synchronous data networks
X.75	10-1996	Packet-switched signalling system between public networks providing data transmission services
X.75 (1996) Corrigendum 1	09-1998	
X.76	02-2003	Network-to-network interface between public networks providing PVC and/or SVC frame relay data transmission service
X.77	08-1997	Interworking between PSPDNs via B-ISDN
X.77 (1997) Corrigendum 1	03-2000	
X.78	06-1999	Interworking procedures between networks providing frame relay data transmission services via B-ISDN
X.78 (1999) Corrigendum 1	03-2000	
X.80	11-1988	Interworking of interexchange signalling systems for circuit-switched data services
X.81	11-1988	Interworking between an ISDN circuit-switched and a circuit-switched public data network (CSPDN)
X.82	11-1988	Detailed arrangements for interworking between CSPDNs and PSPDNs based on Recommendation T.70
X.84	03-2004	Support of frame relay services over MPLS core networks

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X.85/Y.1321	03-2001	IP over SDH using LAPS	
X.85/Y.1321 (2001) Amendment 1	04-2004	Bit-oriented method for LAPS	
X.86/Y.1323	02-2001	Ethernet over LAPS	
X.86/Y.1323 (2001) Amendment 1	04-2002	Using Ethernet flow control as rate limiting	
X.87/Y.1324	10-2003	Multiple services ring based on RPR	Pre-published.
X.92	11-1988	Hypothetical reference connections for public synchronous data networks	
X.96	03-2000	Call progress signals in public data networks	
X.110	04-2002	International routing principles and routing plan for Public Data Networks	
X.111	02-2003	Principles for the routing of international frame relay traffic	
X.115	04-1995	Definition of address translation capability in public data networks	
X.115 (1995) Amendment 1	10-1996	Refinements	
X.116	10-1996	Address translation registration and resolution protocol	
X.121	10-2000	International numbering plan for public data networks	
E.166/X.122	03-1998	Numbering plan interworking for the E.164 and X.121 numbering plans	
X.123	10-1996	Mapping between escape codes and TOA/NPI for E.164/X.121 numbering plan interworking during the transition period	
X.124	06-1999	Arrangements for the interworking of the E.164 and X.121 numbering plans for frame relay and ATM networks	
X.125	09-1998	Procedure for the notification of the assignment of international network identification codes for public frame relay data networks and ATM networks numbered under the E.164 numbering plan	
X.130	11-1988	Call processing delays in public data networks when providing international synchronous circuit-switched data services	
X.131	11-1988	Call blocking in public data networks when providing international synchronous circuit-switched data services	
X.134	08-1997	Portion boundaries and packet-layer reference events: basis for defining packet-switched performance parameters	
X.135	08-1997	Speed of service (delay and throughput) performance values for public data networks when providing international packet-switched services	
X.135 Suppl. 1	08-1997	Some test results from specific national and international portions	Not available, contact <a href='mailto:sale s@itu.int'&gt;sales @itu.int.</a 
X.136	08-1997	Accuracy and dependability performance values for public data networks when providing international packet-switched services	
X.137	08-1997	Availability performance values for public data networks when providing international packet-switched services	

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X.138	08-1997	Measurement of performance values for public data networks when providing international packet-switched services
X.139	08-1997	Echo, drop, generator and test DTEs for measurement of performance values in public data networks when providing international packet-switched services
X.140	09-1992	General quality of service parameters for communication via public data networks
X.141	11-1988	General principles for the detection and correction of errors in public data networks
X.142	10-2003	Quality of service metrics for characterizing Frame Relay/ATM service interworking performance
X.144	10-2003	User information transfer performance parameters for public frame relay data networks
X.145	10-2003	Connection establishment and disengagement performance parameters for public Frame Relay data networks providing SVC services
X.146	10-2000	Performance objectives and quality of service classes applicable to frame relay
X.147	10-2003	Frame Relay network availability
X.147 (2003) Amendment 1	04-2004	Specification of availability objective values
X.148	02-2003	Procedures for the measurement of the performance of public data networks providing the international frame relay service
X.149	10-2003	Performance of IP networks when supported by public Frame Relay data networks
X.150	11-1988	Principles of maintenance testing for public data networks using Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) test loops
X.151	10-2003	Frame Relay operations and maintenance – Principles and functions
X.151 (2003) Erratum 1	03-2004	
X.160	10-1996	Architecture for customer network management service for public data networks
X.161	08-1997	Definition of customer network management services for public data networks
X.162	03-2000	Definition of management information for customer network management service for public data networks to be used with the CNMc interface
X.163	04-1995	Definition of management information for customer network management service for public data networks to be used with the CNMe interface
X.170	06-1999	Network-network management architecture for data networks
X.171	03-2000	Network-network management services for data networks
X.180	11-1988	Administrative arrangements for international closed user groups (CUGs)
X.181	11-1988	Administrative arrangements for the provision of international permanent virtual circuits (PVCs)
X.200	07-1994	Information technology – Open Systems Interconnection – Basic Reference Model: The basic model

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X.207	11-1993	Information technology – Open Systems Interconnection – Application layer structure
X.210	11-1993	Information technology – Open Systems Interconnection – Basic Reference Model: Conventions for the definition of OSI services
X.211	11-1995	Information technology – Open Systems Interconnection – Physical service definition
X.212	11-1995	Information technology – Open Systems Interconnection – Data Link service definition
X.213	10-2001	Information technology – Open Systems Interconnection – Network service definition
X.214	11-1995	Information technology – Open Systems Interconnection -Transport service definition
X.215	11-1995	Information technology – Open Systems Interconnection – Session service definition
X.215 (1995) Amendment 1	08-1997	Efficiency enhancements
X.215 (1995) Amendment 2	12-1997	Nested connections functional unit
X.215 (1995) Technical Cor. 1	03-2000	
X.216	07-1994	Information technology – Open Systems Interconnection – Presentation service definition
X.216 (1994) Amendment 1	08-1997	Efficiency enhancements
X.216 (1994) Amendment 2	12-1997	Nested connections functional unit
X.217	04-1995	Information technology – Open Systems Interconnection – Service definition for the Association Control Service Element
X.217 (1995) Amendment 1	10-1996	Support of authentication mechanisms for the connectionless mode
X.217 (1995) Amendment 2	08-1997	Fast-associate mechanism
X.217bis	09-1998	Information technology – Open Systems Interconnection – Service definition for the Application Service Object Association Control Service Element
X.218	03-1993	Reliable Transfer: Model and service definition
X.219	11-1988	Remote Operations: Model, notation and service definition
X.220	03-1993	Use of X.200-Series protocols in CCITT applications
X.222	04-1995	Use of X.25 LAPB-compatible Data Link procedures to provide the OSI connection-mode Data Link service
X.222 (1995) Amendment 1	10-1996	Frame relay mapping
X.223	11-1993	Use of X.25 to provide the OSI connection-mode Network service for ITU-T applications

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X.223 (1993) Amendment 1	10-1996	Transit delay and other refinements
X.224	11-1995	Information technology – Open Systems Interconnection – Protocol for providing the connection-mode transport service
X.224 (1995) Amendment 1	08-1997	Relaxation of class conformance requirements and expedited data service feature negotiation
X.225	11-1995	Information technology – Open Systems Interconnection – Connection- oriented Session protocol: Protocol specification
X.225 (1995) Amendment 1	08-1997	Efficiency enhancements
X.225 (1995) Amendment 2	12-1997	Nested connections functional unit
X.225 (1995) Technical Cor. 1	03-2000	
X.226	07-1994	Information technology – Open Systems Interconnection – Connection- oriented Presentation protocol: Protocol specification
X.226 (1994) Amendment 1	08-1997	Efficiency enhancements
X.226 (1994) Amendment 2	12-1997	Nested connections functional unit
X.227	04-1995	Information technology – Open Systems Interconnection – Connection- oriented protocol for the Association Control Service Element: Protocol specification
X.227 (1995) Amendment 1	10-1996	Incorporation of extensibility markers
X.227 (1995) Amendment 2	08-1997	Fast-associate mechanism
X.227bis	09-1998	Information technology – Open Systems Interconnection – Connection- mode protocol for the Application Service Object Association Control Service Element
X.228	11-1988	Reliable Transfer: Protocol specification
X.228 (1988) Corrigendum 1	03-2000	
X.229	11-1988	Remote Operations: Protocol specification
X.233	08-1997	Information technology – Protocol for providing the connectionless-mode network service: Protocol specification
X.234	07-1994	Information technology – Protocol for providing the OSI connectionless-mode transport service
X.234 (1994) Amendment 1	11-1995	Addition of connectionless-mode multicast capability
X.235	04-1995	Information technology – Open Systems Interconnection – Connectionless Session protocol: Protocol specification
X.235 (1995) Amendment 1	06-1999	Efficiency enhancements
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X.246	10-1996	Information technology – Open Systems Interconnection – Connection- oriented Presentation protocol: Protocol Implementation Conformance Statement (PICS) proforma
X.247	10-1996	Information technology – Open Systems Interconnection – Protocol specification for the Association Control Service Element: Protocol Implementation Conformance Statement (PICS) proforma
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Y.100	06-1998	General overview of the Global Information Infrastructure standards development	
Y.101	03-2000	Global Information Infrastructure terminology: Terms and definitions	
Y.110	06-1998	Global Information Infrastructure principles and framework architecture	
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Y.120 (1998) Corrigendum 1	11-2000		
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Y.130	03-2000	Information communication architecture	
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Y.140.1	03-2004	Guideline for attributes and requirements for interconnection between public telecommunication network operators and service providers involved in provision of telecommunication services	
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Y.1221	03-2002	Traffic control and congestion control in IP-based networks	
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Y.1271	10-2004	Framework(s) on network requirements and capabilities to support emergency telecommunications over evolving circuit-switched and packet-switched networks	
Y.1281	09-2003	Mobile IP services over MPLS	
Y.1291	05-2004	An architectural framework for support of Quality of Service in packet networks	Pre-published.
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G.8010/Y.1306	02-2004	Architecture of Ethernet layer networks	
G.8011/Y.1307	08-2004	Ethernet over Transport – Ethernet services framework	Available only in MS Word.
G.8011.1/Y.1307. 1	08-2004	Ethernet private line service	
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Y.1311	03-2002	Network-based VPNs – Generic architecture and service requirements	
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G.870/Y.1352	06-2004	Terms and definitions for optical transport networks (OTN)	
G.8081/Y.1353	06-2004	Terms and definitions for Automatically Switched Optical Networks (ASON)	
G.8110/Y.1370	01-2005	MPLS layer network architecture	Pre-published.
Y.1401	10-2000	General requirements for interworking with Internet protocol (IP)-based networks	
X.371/Y.1402	02-2001	General arrangements for interworking between Public Data Networks and the Internet	
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Y.1540	12-2002	Internet protocol data communication service – IP packet transfer and availability performance parameters	
Y.1540 (2002) Amendment 1	08-2003	New Appendix VIII: Background on IP service availability	
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G.7715.1/Y.1706. 1	02-2004	ASON routing architecture and requirements for link state protocols	
G.7718/Y.1709	02-2005	Framework for ASON management	Pre-published.
Y.1710	11-2002	Requirements for Operation & Maintenance functionality in MPLS networks	
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Z.100 (2002) Amendment 1	10-2003	Backwards compatibility and compliance	
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Z.100 Annex F2	11-2000	SDL formal definition: Static semantics	Available only in PDF.
Z.100 Annex F3	11-2000	SDL formal definition: Dynamic semantics	
Z.100 Supplement 1	05-1997	SDL+ methodology: use of MSC and SDL (with ASN.1)	
Z.104	10-2004	Encoding of SDL data	
Z.105	07-2003	SDL combined with ASN.1 modules (SDL/ASN.1)	
Z.106	08-2002	Common interchange format for SDL	
Z.107	11-1999	SDL with embedded ASN.1	
Z.109	11-1999	SDL combined with UML	
Z.110	11-2000	Criteria for use of formal description techniques by ITU-T	
Z.120	04-2004	Message sequence chart (MSC)	Pre-published.
Z.120 Annex B	04-1998	Formal semantics of message sequence charts	Available only in PDF.
Z.121	02-2003	Specification and Description Language (SDL) data binding to Message Sequence Charts (MSC)	
Z.130	07-2003	Extended Object Definition Language (eODL): Techniques for distributed software component development – Conceptual foundation, notations and technology mappings	Pre-published.
Z.140	04-2003	Testing and Test Control Notation version 3 (TTCN-3): Core language	
Z.141	02-2003	Testing and Test Control Notation version 3 (TTCN-3): Tabular presentation format	
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Z.150	02-2003	User Requirements Notation (URN) - Language requirements and framework	
Z.200	11-1999	CHILL – The ITU-T Programming Language	
Z.301	11-1988	Introduction to the CCITT man-machine language	

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Z.302	11-1988	The meta-language for describing MML syntax and dialogue procedures	
Z.311	11-1988	Introduction to syntax and dialogue procedures	
Z.312	11-1988	Basic format layout	
Z.314	11-1988	The character set and basic elements	
Z.315	11-1988	Input (command) language syntax specification	
Z.316	11-1988	Output language syntax specification	
Z.317	11-1988	Man-machine dialogue procedures	
Z.321	11-1988	Introduction to the extended MML for visual display terminals	
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Z.400	03-1993	Structure and format of quality manuals for telecommunications software	
Z.450	10-2003	Quality aspects of protocol-related Recommendations	
Z.500	05-1997	Framework on formal methods in conformance testing	
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