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Series A: Organization of the work of ITU-T

Number	Approved in	Title	Status
A.1	10-2000	Work Methods for Study Groups of the ITU Telecommunication Standardization Sector (ITU-T)	
A.2	10-2000	Presentation of contributions relative to the study of Questions assigned to the 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	06-2002	Focus groups: Working methods and procedures	
A.8	10-2000	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	10-2000	Publication of ITU-T Recommendations and WTSA proceedings	
A.12	10-2000	Identification and layout of ITU-T Recommendations	
A.13	10-2000	Supplements to ITU-T Recommendations	
A.23 Annex A	11-2001	Guide to ITU-T and ISO/IEC JTC1 cooperation	
A.Sup1	09-1998	Guidelines on quality aspects of protocol related Recommendations	
A.Sup2	06-2000	Guidelines on interoperability experiments	
A.Sup3	11-2001	IETF and ITU-T collaboration guidelines	

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Series B: Means of expression: definitions, symbols, classification

Number	Approved in	Title	Status
B.11	11-1988	Legal time - use of the term UTC	

Series D: General tariff principles

Number	Approved in	Title	Status
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	
D.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	
D.5	11-1988	Costs and value of services rendered as factors in the fixing of rates	
D.7	01-1992	Concept and implementation of "one-stop shopping" for international private leased telecommunication circuits	
D.8	11-1988	Special conditions for the lease of international end-to-end digital circuits for private service	
D.9	11-1988	Private leasing of transmitters or receivers	
D.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	
D.12	11-1988	Measurement unit for charging by volume in the international packet-switched data communication service	
D.13	11-1988	Guiding principles to govern the apportionment of accounting rates in international packet-switched public data communication relations	
D.15	11-1988	General charging and accounting principles for non-voice services provided by interworking between public data networks	
D.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	
D.30	11-1988	Implementation of reverse charging on international public data communication services	
D.35	01-1992	General charging principles in the international public message handling services and associated applications	
D.36	03-1995	General accounting principles applicable to message handling services and associated applications	
D.37	07-1996	Accounting and settlement principles applicable to the provision of public directory services between interconnected Directory Management Domains	
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 *A Corrigendum was indicated in 02/1990 for the English version.*	
D.45	06-1992	Charging and accounting principles for the international telemessage service	
D.50	10-2000	International Internet Connection	
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.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 *The date of entry into force of this Recommendation was fixed at the 01 July 1995. Covering note, May 1999: Spanish only*	
D.91	07-1996	Transmission in encoded form of maritime telecommunications accounting information *TSB circular 125 (29 June 1998) and corresponding covering note detail year 2000 issues regarding the interpretation of transmitted year data.*	
D.93	11-2003	Charging and accounting in the international land mobile telephone service (provided via cellular radio systems)	Pre-published.
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	
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 *This Recommendation is also included but not published in E series under alias number E.231*	
E.232/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 *This Recommendation is also published under alias number D.104. For more details, see D.104*	
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 international telephone service	
D.110	06-1992	Charging and accounting for conference calls	
D.115	10-1996	Tariff principles and accounting for the International Freephone Service (IFS)	
D.116	10-1996	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 Supplement 1	06-2002	Updated teledensities and indicative target settlement rates	

D.150	06-1999	New system for accounting in international telephony	
E.251/D.151	11-1988	Old system for accounting in international telephony *A correction was introduced in a Covering note by June 1990*	
D.151	11-1988	Old system for accounting in international telephony *A correction was introduced in a Covering note by June 1990*	
D.155	07-1996	Guiding principles governing the apportionment of accounting rates in intercontinental telephone relations	
E.252/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.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	
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	
E.277/D.174	11-1988	Conventional transmission of information necessary for billing and accounting regarding collect and credit card calls	
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 *TSB circular 125 (29 June 1998) and corresponding covering note detail year 2000 issues regarding the interpretation of transmitted year data.*	
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.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.192	06-1992	Principles for charging and accounting of service telecommunications	
D.193	11-1988	Special tariff principles for privilege telecommunications	
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	
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	

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 *Covering note, August 1998: Applicability of 1992 values of standard accounting rate shares components*	
D.301R	03-1995	Determination of accounting rate shares and collection charges in telex relations between countries in Europe and the Mediterranean Basin *Covering note, August 1998: Applicability of 1984 values of standard accounting rate shares components*	
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 *Covering note, August 1998: Applicability of 1984 values of standard transition and terminal rate shares components*	
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 *Covering note, August 1998: Applicability of 1984 values of standard accounting rate shares components*	
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 *Covering note, August 1998: Applicability of 1984 values of flat-rate remuneration*	
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 *Covering note, August 1998: Applicability of 1984 values of the annual rental*	
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	
D.501R	10-1993	Accounting rates applicable to telex relations between countries in Asia and Oceania	
D.600R	10-2000	Implementor's guide for Recommendation G.763 (14 April 2000)	
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 relations	
D.603R	12-2002	Minimizing collection charges on inter-African calls	
D.606R	11-1988	Preferential rates in telecommunication relations between countries in Africa	
D.Sup3	03-1993	Handbook on the methodology for determining costs and establishing	

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

Number	Approved in	Title	Status
E.100	11-1988	Definitions of terms used in international telephone operation	
Q.11 *ter*/E.165	11-1988	Timetable for coordinated implementation of the full capability of the numbering plan for the ISDN era (Recommendation E.164) *This Recommendation is also published under alias number Q.11 ter*	
X.122/E.166	03-1998	Numbering plan interworking for the E.164 and X.121 numbering plans *This Recommendation is published with the double number E.166 and X.122*	
Q.35/E.180	03-1998	Technical characteristics of tones for the telephone service *This Recommendation is published with the double number E.180 and Q.35*	
F.120/E.210	11-1988	Ship station identification for VHF/UHF and maritime mobile-satellite services *This Recommendation is also published under alias number E.210*	
D.104/E.232	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 *This Recommendation is also published under alias number D.104. For more details, see D.104*	
D.151/E.251	11-1988	Old system for accounting in international telephony *A correction was introduced in a Covering note by June 1990*	
D.160/E.252	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.174/E.277	11-1988	Conventional transmission of information necessary for billing and accounting regarding collect and credit card calls	
E.300 Series Supplement 1	11-1988	List of possible supplementary telephone services which may be offered to subscribers	
E.300 Series Supplement 3	11-1988	North american precise audible tone plan	
E.300 Series Supplement 4	11-1988	Treatment of calls considered as terminating abnormally	
E.300 Series Supplement 5	10-1984	Modelling of an experimental test design for the determination of inexperienced user difficulties in setting up international calls using nationally available instructions, or to compare different sets of instructions	
E.300 Series Supplement 6	11-1988	Preparation of information to customers travelling abroad	
E.300 Series Supplement 7	11-1988	Description of INMARSAT existing and planned systems	
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 for disaster relief operations (IEPS)	
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.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	07-1996	Pictograms, symbols and icons to assist users of the telephone service	
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	
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	The international telecommunication charge card	
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/I.331	05-1997	The international public telecommunication numbering plan *This Recommendation is published under alias number E.164*	
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	05-2002	Supplement 3: Operational and administrative issues associated with national implementations of the ENUM functions	
E.164 Supplement 4	05-2003	Operational and administrative issues associated with the implementation of ENUM for non-geographic country codes	
E.164.1	10-2003	Criteria and procedures for the reservation, assignment and reclamation of	

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) *This Recommendation is also published under alias number Q.11 ter*	
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 *This Recommendation is published with the double number E.166 and X.122*	
E.167	11-1988	ISDN network identification codes	
E.168	05-2002	Application of E.164 numbering plan for UPT	
E.168.1	05-2002	Assignment procedures for universal personal telecommunications (UPT) numbers in the provisioning of the 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 *This version is a revision of former Rec. E.169 (11/1998)*	
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 *Replaces ITU-T I.335 (1988).*	
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 *This Recommendation is published with the double number E.180 and Q.35*	
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	
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.191.1	02-2001	Criteria and procedures for the allocation of the 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.212	11-1998	The international identification plan for mobile terminals and mobile users	
E.212 (1998) Amendment 1	05-2003	New Annex A: Criteria and procedures for the assignment of shared E.212 mobile country codes (MCC) and their respective mobile network codes (MNC)	
E.213	11-1988	Telephone and ISDN numbering plan for land mobile stations in public land mobile networks (PLMN)	
E.214	11-1988	Structure of the land mobile global title for the signalling connection control	

E.217	05-2002	Maritime communications - Ship station identity	
E.220	02-1996	Interconnection of public land mobile networks (PLMN)	
E.230	08-1992	Chargeable duration of calls	
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	
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	
E.330	11-1988	User control of ISDN-supported services	
E.331	10-1991	Minimum user-terminal interface for a human user entering address information into an ISDN terminal	
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 & 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 & requirements	
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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 - Routing table management methods and 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.800 Series Supplement 1	11-1988	Table of the Erlang formula	
E.800 Series Supplement 2	11-1988	Curves showing the relation between the traffic offered and the number of circuits required	
E.800 Series Supplement 5	11-1988	Teletraffic implications for international switching and operational procedures resulting from a failure of a transmission facility	
E.800 Series Supplement 7	11-1988	Guide for evaluating and implementing alternate routing networks	
E.401	11-1988	Statistics for the international telephone service (number of circuits in operation and volume of traffic)	
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	

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	
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.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 requirementsfor 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.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	
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 using Internet telephony for a portion of the connection	
E.681	10-2001	Traffic engineering methods for IP access 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	
E.712	10-1992	User plane traffic modelling	
E.713	10-1992	Control plane traffic modelling *Only the title changes*	
E.716	10-1996	User demand modelling in Broadband-ISDN	
E.720	11-1988	ISDN grade of service concept	
E.721	05-1999	Network grade of service parameters and target values for circuit-switched services in the evolving ISDN	
E.723	06-1992	Grade-of-service parameters for Signalling System No. 7 networks	
E.724	02-1996	GOS parameters and target GOS objectives for IN services	
E.726	03-2000	Network grade of service parameters and target values for B-ISDN	
E.728	03-1998	Grade-of-service parameters for B-ISDN signalling	
E.731	10-1992	Methods for dimensioning resources operating in circuit-switched mode	
E.733	11-1998	Methods for dimensioning resources in Signalling System No. 7 networks	
E.734	10-1996	Methods for allocating and dimensioning Intelligent Network (IN) resources	
E.735	05-1997	Framework for traffic control and dimensioning in B-ISDN	
E.736	03-2000	Methods for cell level traffic control in B-ISDN	
E.737	02-2001	Dimensioning methods for B-ISDN	
E.743	04-1995	Traffic measurements for SS No. 7 dimensioning and planning	
E.744	10-1996	Traffic and congestion control requirements for SS No. 7 and IN-structured networks	
E.745	03-2000	Cell level measurement requirements for the B-ISDN	

E.751	02-1996	Reference connections for traffic engineering of land mobile networks	
E.752	10-1996	Reference connections for traffic engineering of maritime and aeronautical systems	
E.755	02-1996	Reference connections for UPT traffic performance and GOS	
E.760	03-2000	Terminal mobility traffic modelling	
E.770	03-1993	Land mobile and fixed network interconnection traffic grade of service concept	
E.771	10-1996	Network grade of service parameters and target values for circuit-switched public land mobile services	
E.773	10-1996	Maritime and aeronautical mobile grade of service concept	
E.774	10-1996	Network grade of service parameters and target values for maritime and aeronautical mobile services	
E.775	02-1996	UPT grade of service concept	
E.776	10-1996	Network grade of service parameters for UPT	
E.800	08-1994	Terms and definitions related to quality of service and network performance including dependability	
E.801	10-1996	Framework for service quality agreement	
E.810	10-1992	Framework of the Recommendations on the serveability performance and service integrity for telecommunication services	
E.820	10-1992	Call models for serveability and service integrity performance	
E.830	10-1992	Models for the specification, evaluation and allocation of serveability and service integrity	
E.845	11-1988	Connection accessibility objective for the international telephone service	
E.846	03-1993	Accessibility for 64 kbit/s circuit-switched international end-to-end ISDN connection types	
E.850	10-1992	Connection retainability objective for the international telephone service	
E.855	11-1988	Connection integrity objective for the international telephone service	
E.860	06-2002	Framework of a service level agreement	
E.862	06-1992	Dependability planning of telecommunication networks	
E.880	11-1988	Field data collection and evaluation on the performance of equipment, networks and services	

Series F: Non-telephone telecommunication services

Number	Approved in	Title	Status
F.1	03-1998	Operational provisions for the international public telegram service	
F.2	11-1988	Operational provisions for the collection of telegram charges *Published as F.42 (11/88), then renumbered as F.2*	
F.4	11-1988	Plain and secret language	
F.10	11-1988	Character error rate objective for telegraph communication using 5-unit start-stop equipment	
F.11	10-1991	Continued availability of traditional services	
F.14	08-1992	General provisions for one-stop-shopping arrangements	
F.15	08-1992	Evaluating the success of new services	
F.16	02-1995	Global virtual network service	
F.17	08-1992	Operational aspects of service telecommunications	
F.18	03-1998	Guidelines on harmonization of international public bureau services	
F.19	01-1996	Collection and dissemination of official serviceinformation	
F.20	11-1988	The international gentex service	
F.21	11-1988	Composition of answer-back codes for the international gentex service	
F.23	11-1988	Grade of service for long-distance international gentex circuits	
F.24	11-1988	Average grade of service from country to country in the gentex service	
F.30	03-1993	Use of various sequences of combinations for special purposes	
F.31	11-1988	Telegram retransmission system	
F.32	10-1995	Telegram destination indicators *Formerly Rec. F.96.*	
F.35	11-1988	Provisions applying to the operation of an international public automatic message switching service for equipments utilizing the international telegraph Alphabet No. 2	
F.40	03-1991	International public telemessage service *Formerly Rec. F.50.*	
F.41	03-1991	Interworking between the telemessage service and the international public telegram service *Formerly Rec. F.51.*	
F.59	10-1996	General characteristics of the international telex service	
F.60	08-1992	Operational provisions for the international telex service	
F.61	11-1988	Operational provisions relating to the chargeable duration of a telex call	
F.63	03-1993	Additional facilities in the international telex service	
F.64	11-1988	Determination of the number of international telex circuits required to carry a given volume of traffic	
F.65	11-1988	Time-to-answer by operators at international telex positions	
F.68	11-1988	Establishment of the automatic intercontinental telex network	
F.69	06-1994	The international telex service - Service and operational provisions of telex destination codes and telex network identification codes	
F.70	11-1988	Evaluating the quality of the international telex service	
F.71	11-1988	Interconnection of private teleprinter networks with the telex network	
F.72	10-1996	The international telex service - General principles and operational aspects of a store and forward facility	
F.74	08-1992	Intermediate storage devices accessed from the international telex service using single stage selection - Answerback format	

F.82	10-1991	Operational provisions to permit interworking between the international telex service and the intex service	
F.83	07-1990	Operational principles for communication between terminals of the international telex service and data terminal equipment on packet-switched public data networks *Published as F.73, then renumbered as F.83. A Corrigendum was indicated in 12/1990.*	
F.86	10-1991	Interworking between the international telex service and the videotex service	
F.87	03-1991	Operational principles for the transfer of messages from terminals on the telex network to Group 3 facsimile terminals connected to the public switched telephone network *Drafted as F.76, then renumbered and published as F.87.*	
F.89	08-1992	Status enquiry function in the international telex service	
F.100	11-1988	Scheduled radiocommunication service	
F.104	10-1991	International leased circuit services - customer circuit designations	
F.105	11-1988	Operational provisions for phototelegrams *Published as F.80 (11/88), then renumbered as F.105.*	
F.106	11-1988	Operational provisions for private phototelegraph calls *Published as F.80 bis (11/88), then renumbered as F.106.*	
F.107	11-1988	Rules for phototelegraph established calls over circuits normally used for telephone traffic *Published as F.82 (11/88), then renumbered as F.107. This Recommendation is also included but not published in E series under alias number E.323.*	
F.108	11-1988	Operating rules for international phototelegraph calls to multiple destinations *Published as F.85 (11/88), then renumbered as F.108.*	
F.110	07-1996	Operational provisions for the maritime mobile service *The date of entry into effect of this Recommendation edition is 1 January 1997.*	
F.111	03-1991	Principles of service for mobile systems	
F.112	11-1988	Quality objectives for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service	
F.113	08-1992	Service provisions for aeronautical passenger communications supported by mobile-satellite systems	
F.115	02-1995	Service objectives and principles for future public land mobile telecommunication systems	
F.116	03-2000	Service features and operational provisions in IMT-2000	
E.210/F.120	11-1988	Ship station identification for VHF/UHF and maritime mobile-satellite services *This Recommendation is also published under alias number E.210*	
F.120	11-1988	Ship station identification for VHF/UHF and maritime mobile-satellite services *This Recommendation is also published under alias number E.210*	
F.122	11-1988	Operational procedures for the maritime satellite data transmission service	
F.127	10-1996	Operational procedures for interworking between the international telex service and the service offered by the INMARSAT-C system	
F.130	11-1988	Maritime answer-back codes	
F.131	11-1988	Radiotelex service codes	
F.140	03-1993	Point-to-multipoint telecommunication service via satellite	
F.141	06-1994	International two-way multipoint telecommunication service via satellite	
F.150	10-1991	Service and operational provisions for the Intex service	
F.162	07-1996	Service and operational requirements of store-and-forward facsimile service	
F.163	07-1996	Operational requirements of the interconnection of facsimile store-and-forward units	
F.170	03-1998	Operational provisions for the international public facsimile service between public bureaux (Bureaufax)	
F.171	11-1988	Operational provisions relating to the use of store-and-forward switching nodes within the bureaufax service	
F.182*bis*	10-1996	Guidelines for the support of the communication of documents using Group 3	

F.185	06-1998	Internet facsimile: Guidelines for the support of the communication of facsimile documents	
F.190	08-1992	Operational provisions for the international facsimile service between public bureaux and subscriber stations and vice versa (bureaufax-telefax and vice versa)	
F.300	03-1993	Videotex service	
F.301	10-1995	Fast speed PSTN videotex	
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)	
X.400/F.400	06-1999	Message handling services: Message handling system and service overview	Pre-published.
F.400/X.400	06-1999	Message handling services: Message handling system and service overview	Pre-published.
F.401	08-1992	Message handling services: Naming and addressing for public message handling services	
F.410	08-1992	Message handling system: The public message transfer service	
F.415	11-1988	Message handling system: Intercommunication with public physical delivery services *Erratum in F.410 (08/92)*	
F.420	08-1992	Message handling system: The public interpersonal messaging service	
F.421	11-1988	Intercommunication between the IPM service and the telex service *This Recommendation is also included but not published in F series under alias number F.85. Covering note, December 1999: Intercommunication between the IPM service and the telex service.*	
F.421 Errata	12-1999	Errata to Recommendation F.421 (11/88)	
F.423	08-1992	Message handling system: 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	Corrigendum 1	
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	09-1998	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.761	11-1988	Service-oriented requirements for telewriting applications *Published as F.730 (11/88), then renumbered as F.761.*	

F.812	08-1992	Broadband connectionless data bearer service	
F.813	02-1995	Virtual path service for reserved and permanent communications	
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	Terms and definitions for telex	

Series G: Transmission systems and media, digital systems and networks

Number	Approved in	Title	Status
G.100	02-2001	Definitions used in Recommendations on general characteristics of international telephone connections and circuits	
G.100.1	11-2001	The use of the decibel and of relative levels in speechband telecommunications	
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	03-2003	The E-Model, a computational model for use in transmission planning	
G.108	09-1999	Application of the E-model: A planning guide *Covering note, November 2000: Erratum*	
G.108 Erratum 1	12-2000	Erratum to Recommendation ITU-T G.108 (09/99)	
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 *Appendix I in G.113 was revised by 10/2001 version*	
G.113 Appendix I	05-2002	Provisional planning values for the equipment impairment factor Ie 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 *The text introduced by this amendment was directly included in G.114 (05/2003)*	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	
G.121	03-1993	Loudness ratings (LRs) of national systems	
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	Pre-published.
G.136	09-1999	Application rules for automatic level control devices *Covering note, May 2000: Erratum*	
G.136 Erratum 1	12-2000	Erratum to Recommendation ITU-T G.136 (09/99)	
G.142	12-1998	Transmission characteristics of exchanges	
G.161	06-2002	Interaction aspects of signal processing network equipment	
G.164	11-1988	Echo suppressors	
G.165	03-1993	Echo cancellers	
G.167	03-1993	Acoustic echo controllers	
G.168	06-2002	Digital network echo cancellers	
G.169	07-1999	Automatic level control devices	

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	
G.181	03-1993	Characteristics of 1 + 1 type restoration systems for use on digital transmission links	
G.191 STL-2000 Manual	12-2000	ITU-T Software Tool Library 2000 User's Manual	
G.192	03-1996	A common digital parallel interface for speech standardisation 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	
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 *This Recommendation was formerly also included in Q series under number Q.16*	
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	
G.232	11-1988	12-channel terminal equipments	
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.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	
G.411	11-1988	Use of radio-relay systems for international telephone circuits	
G.421	11-1988	Methods of interconnection	
G.422	11-1988	Interconnection at audio-frequencies	
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 Mbits	
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	06-2002	Definitions and test methods for linear, deterministic attributes of single-mode fibre and cable *Results from the subdivision of ITU-T Rec. G.650 (2000-10)*	
G.650.1 (2002) Amendment 1	03-2003		
G.650.2	06-2002	Definitions and test methods for statistical and non-linear attributes of single-mode fibre and cable *Results from the subdivision of ITU-T Rec. G.650 (2000-10)*	
G.650.2 (2002) Amendment 1	03-2003		
G.651	02-1998	Characteristics of a 50/125 µm multimode graded index optical fibre cable	
G.653	12-2003	Characteristics of a dispersion-shifted single-mode optical fibre and cable	Pre-published.
G.654	06-2002	Characteristics of 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.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	
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.671	06-2002	Transmission characteristics of optical components and subsystems	
G.691	12-2003	Optical interfaces for single-channel STM-64, STM-256 and other SDH	Pre-

G.692	10-1998	Optical interfaces for multichannel systems with optical amplifiers *Covering note, 07.01.2000: Corrigendum 1*	
G.692 (1998) Corrigendum 1	01-2000		
G.692 (1998) Corrigendum 2	06-2002		
G.693	12-2003	Optical interfaces for intra-office systems	Pre-published.
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	Pre-published.
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	
Y.1322/G.707	12-2003	Network node interface for the synchronous digital hierarchy (SDH)	Pre-published.
G.707/Y.1322	12-2003	Network node interface for the synchronous digital hierarchy (SDH)	Pre-published.
G.708	07-1999	Sub STM-0 network node interface for the synchronous digital hierarchy (SDH)	
Y.1331 (2003) Amend.1/G.709	12-2003		Pre-published.
Y.1331/G.709	03-2003	Interfaces for the Optical Transport Network (OTN)	Pre-published.
G.709/Y.1331	03-2003	Interfaces for the Optical Transport Network (OTN)	Pre-published.
G.709/Y.1331 (2003) Amendment 1	12-2003		Pre-published.
G.711	11-1988	Pulse code modulation (PCM) of voice frequencies *Corresponding ANSI-C code is available in the G.711 module of the ITU-T G.191 Software Tools Library.*	
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 *Corresponding ANSI-C code is available in the G722 module of the ITU-T G.191 Software Tools Library*	
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.722.1 (1999) Corrigendum 1	11-2000	Corrigendum 1	
G.722.1 Annex A	02-2000	Packet format, capability identifiers and capability parameters	

G.722.2 Annex B	01-2002	Source Controlled Rate operation	
G.722.2 Annex E	01-2002	Frame structure	
G.722.2 Annex F	11-2002	AMR-WB usage in H.245	
G.723	*Speech coders*		
G.723.1	03-1996	Speech coders : Dual rate speech coder for multimedia communications transmitting at 5.3 and 6.3 kbit/s *Test vectors, test sequences and C Reference code described in this Recommendation are common to Recommendation main body and to Annex A, and may be found on 3 diskettes included with G.723.1 Annex A.*	
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) *Corresponding ANSI-C code is available in the G.726 module of the ITU-T G.191 Software Tools Library*	
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 Appendix III	05-1994	Comparison of ADPCM algorithms *This Appendix is published with the double number G.726 App. III and G.727 App. II*	
G.727	12-1990	5-, 4-, 3- and 2-bit/sample embedded adaptive differential pulse code modulation (ADPCM) *Corresponding ANSI-C code is available in the G.727 module of the ITU-T G.191 Software Tools Library*	
G.727 Annex A	11-1994	Extensions of Recommendation G.727 for use with uniform-quantized input and output	
G.727 Appendix II	05-1994	Comparison of ADPCM algorithms *This Appendix is published with the double number G.726 App. III and G.727 App. II*	
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	Corrigendum 1	
G.728 Annex I	05-1999	Frame or packet loss concealment for the LD-CELP decoder	
G.728 Appendix II	11-1995	Speech performance	
G.729 Annex B (1996) Corrigendum 2	02-2000	Corrigendum 2 *This corrigendum concerns only the software; the resulting version 1.4 is included in the published ITU-T Recommendation G.729 Annex B (10/1996)*	
G.729 Annex B (1996) Corrigendum 3	03-2001	Corrigendum 3	
G.729 Annex C+ (2000) Corrigendum 1	03-2001	Corrigendum 1	
G.729 Annex D (1998) Corrigendum 1	02-2000	Corrigendum 1 *This corrigendum concerns only the software; the resulting version 1.3 is included in the published ITU-T Recommendation G.729 Annex D (09/1998)*	
G.729 Annex E (1998) Corrigendum 1	02-2000	Corrigendum 1 *This corrigendum concerns only the software; the resulting version 1.3 is included in the published ITU-T Recommendation G.729 Annex E (09/1998)*	
G.729 Annex F (2000) Corrigendum 1	03-2001	Corrigendum 1	
G.729 Annex G (2000)	03-2001	Corrigendum1	

G.729 Annex I (2000) Corrigendum 1	03-2001	Corrigendum 1	
G.729 Appendix I	06-2001	Appendix I: 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	
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G.734	11-1988	Characteristics of synchronous digital multiplex equipment operating at 1544 kbit/s	
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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.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	
G.747	11-1988	Second order digital multiplex equipment operating at 6312 kbit/s and multiplexing three tributaries at 2048 kbit/s	
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 Erratum 1	12-2000	Erratum to Recommendation ITU-T G.763 (10/98)	
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	

G.768	03-2001	Digital circuit multiplication equipment using 8 kbit/s CS-ACELP	
Y.1242/G.769	08-2002	Circuit Multiplication Equipment optimized for IP-based networks	
G.769/Y.1242	08-2002	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	
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G.774.7	02-2001	Synchronous digital hierarchy (SDH) - Management of lower order path trace and interface labelling for the network element view	
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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.776.3	04-2000	ADPCM DCME configuration map report	
G.780	07-1999	Vocabulary of terms for synchronous digital hierarchy (SDH) networks and equipment	
G.781	07-1999	Synchronization layer functions	
G.783	10-2000	Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks	
G.783 (2000) Corrigendum 1	03-2001	Corrigendum 1 (03/01) to Recommendation G.783	Pre-published.
G.783 (2000) Amendment 1	06-2002	Amendment 1	
G.783 (2000) Corrigendum 2	03-2003	Corrigendum 2 (03/03) to Recommendation G.783	
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	
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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	
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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	02-1998	ATM cell mapping into Plesiochronous Digital Hierarchy (PDH)	
G.805	03-2000	Generic functional architecture of transport networks	
G.806	10-2000	Characteristics of Transport Equipment - Description Methodology and Generic Functionality	
G.806 (2000) Amendment 1	03-2003		
Y.1302/G.807	07-2001	Requirements for automatic switched transport networks (ASTN)	
G.807/Y.1302	07-2001	Requirements for automatic switched transport networks (ASTN)	
G.808.1	12-2003	Generic protection switching - Linear trail and sub-network protection	Pre-published.
G.809	03-2003	Functional architecture of connectionless layer networks	
G.810	08-1996	Definitions and terminology for synchronization networks	
G.810 (1996) Corrigendum 1	11-2001	Corrigendum 1 (10/01) to Recommendation G.810	
G.811	09-1997	Timing characteristics of primary reference clocks	
G.812	06-1998	Timing requirements of slave clocks suitable for use as node clocks in synchronization networks	
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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	03-2000	The control of jitter and wander within digital networks which are based on the synchronous digital hierarchy (SDH)	
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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	Pre-published.
G.828	03-2000	Error performance parameters and objectives for international, constant bit rate synchronous digital paths	
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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.841	10-1998	Types and characteristics of SDH network protection architectures	
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G.852.2	03-1999	Enterprise viewpoint description of transport network resource model	
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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.853.3	03-1999	Information viewpoint for topology management	
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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	
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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.955	11-1996	Digital line systems based on the 1544 kbit/s and the 2048 kbit/s hierarchy on optical fibre cables	
G.957	07-1999	Optical interfaces for equipments and systems relating to the synchronous digital hierarchy	
G.957 (1999) Amendment 1	12-2003		Pre-published.
G.959.1	12-2003	Optical transport network physical layer interfaces	Pre-published.
G.960	03-1993	Access digital section for ISDN basic rate access	
G.961	03-1993	Digital transmission system on metallic local lines for ISDN basic rate access *Covering note, 1st August 2000: Corrigendum 1*	
G.961 erratum	08-2000	Erratum No. 1 to Recommendation ITU-T G.961 (03/93)	
G.962	03-1993	Access digital section for ISDN primary rate at 2048 kbit/s	
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G.963	03-1993	Access digital section for ISDN primary rate at 1544 kbit/s	
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	
G.967	***V-interfaces at the service node (SN)***		
G.967.1	06-1998	V-interfaces at the service node (SN) : VB5.1 reference point specification *This Recommendation includes one diskette containing the SDL process diagrams corresponding to the VB5.1 reference point.*	
G.967.3	03-2000	V-interfaces at the service node (SN) : Protocol implementation conformance statements for interfaces at VB5 reference points	
G.971	04-2000	General features of optical fibre submarine cable systems	
G.972	10-2000	Definition of terms relevant to optical fibre submarine cable systems	
G.973	12-2003	Characteristics of repeaterless optical fibre submarine cable systems	Pre-published.
G.974	03-1993	Characteristics of regenerative optical fibre submarine cable systems	
G.975	10-2000	Forward error correction for submarine systems	
G.976	10-2000	Test methods applicable to optical fibre submarine cable systems	
G.977	04-2000	Characteristics of optically amplified optical submarine cable systems	
G.981	01-1994	PDH optical line systems for the local network	
G.982	11-1996	Optical access networks to support services up to the ISDN primary rate or equivalent bit rates	
G.983.1	10-1998	Broadband optical access systems based on Passive Optical Networks (PON)	
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G.983.1 (1998) Corrigendum 1	03-2002		
G.983.2	06-2002	ONT management and control interface specification for B-PON	
G.983.2 (2002) Amendment 1	03-2003		
G.983.3	03-2001	A broadband optical access system with increased service capability by wavelength allocation	
G.983.3 (2001) Amendment 1	06-2002		
G.983.4	11-2001	A broadband optical access system with increased service capability using dynamic bandwidth assignment	

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.984.1	03-2003	Gigabit-capable Passive Optical Networks (GPON): General characteristics	
G.984.2	03-2003	Gigabit-capable Passive Optical Networks (GPON): Physical Media Dependent (PMD) layer specification	
G.985	03-2003	100 Mbit/s point-to-point Ethernet based optical access system	
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 - For approval - Updated	Pre-published.
G.992.1	07-1999	Asymmetrical digital subscriber line (ADSL) transceivers	
G.992.1 (1999) Corrigendum 1	11-2001	Asymmetric digital subscriber line (ADSL) transceivers Corrigendum 1	
G.992.1 (1999) Corrigendum 2	07-2002	Corrigendum 2 *The changes introduced by this corrigendum are included in G.992.1 (1999) Amendment 1*	
G.992.1 (1999) Amendment 1	03-2003	*This amendment includes the changes introduced by G.992.1 (1999) Corrigendum 2*	Pre-published.
G.992.1 (1999) Amendment 1 Corrigendum 1	12-2003	Corrigendum 1 to G.992.1 Amendment 1	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 G.961 Appendix III	
G.992.2	07-1999	Splitterless asymmetric digital subscriber line (ADSL) transceivers	
G.992.2 (1999) Corrigendum 1	07-2002	Corrigendum 1 *The content of this corrigendum has been incorporated in Amendement 1 (2003)*	
G.992.2 (1999) Amendment 1	03-2003	Revised Annex C *This Amendement includes the modifications of Corrigendum 1 (2002)*	
G.992.2 (1999) Amendment 2	10-2003	Appendix IV - Example overlapped PSD masks for use in a TCM-ISDN crosstalk environment	Pre-published.
G.992.3	07-2002	Asymmetric digital subscriber line transceivers 2 (ADSL2) *This Recommendation includes the changes introduced by Amendment 1 (2003)*	
G.992.3 (2002) Amendment 1	05-2003	*This amendment is not published since its content has been directly incorporated in G.992.3 (07/2002)*	Pre-published.
G.992.3 (2002) Corrigendum 1	12-2003		Pre-published.
G.992.4	07-2002	Splitterless asymmetric digital subscriber line transceivers 2 (splitterless ADSL2)	
G.992.5	05-2003	Asymmetrical Digital Subscriber Line (ADSL) transceivers - Extended bandwidth ADSL2 (ADSL2+)	
G.993.1	11-2001	Very high speed digital subscriber line foundation	
G.993.1 (2001) Amendment 1	03-2003	New Annex F: Regional requirements for environment coexisting with TCM-ISDN DSL as defined in Appendix III of ITU-T Recommendation G.961	

G.995.1 (2001) Amendment 1	11-2001		
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	Pre-published.
G.997.1 (2003) Amendment 1	12-2003		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 utilising IP networks	Pre-published.
Y.1303/G.7041	12-2003	Generic framing procedure (GFP)	Pre-published.
G.7041/Y.1303	12-2003	Generic framing procedure (GFP)	Pre-published.
Y.1305/G.7042	06-2002		
Y.1305 (2001) Cor.2/G.7042	03-2003		
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Y.1701/G.7710	11-2001	Common equipment management function requirements	
G.7710/Y.1701	11-2001	Common equipment management function requirements	
Y.1703/G.7712	03-2003	Architecture and specification of data communication network	
G.7712/Y.1703	03-2003	Architecture and specification of data communication network	
Y.1704/G.7713	12-2001	Distributed call and connection management (DCM)	
Y.1704.1/G.7713.1	03-2003	Distributed call and connection management (DCM) based on PNNI	
Y.1704.2/G.7713.2	03-2003	Distributed Call and Connection Management: Signalling mechanism using GMPLS RSVP-TE	
Y.1704.3/G.7713.3	03-2003	Distributed Call and Connection Management: Signalling mechanism using GMPLS CR-LDP	
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Y.1705/G.7714	11-2001	Generalized automatic discovery techniques	
Y.1705.1/G.7714.1	04-2003	Protocol for automatic discovery in SDH and OTN networks	
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Y.1340/G.8040	12-2003	GFP frame mapping into Plesiochronous Digital Hierarchy (PDH)	Pre-published.
G.8040/Y.1340	12-2003	GFP frame mapping into Plesiochronous Digital Hierarchy (PDH)	Pre-published.

Y.1304 (2001) Amend.1/G.8080	03-2003		
G.8080/Y.1304	11-2001	Architecture for the automatic switched optical networks (ASON)	
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G.8201	09-2003	Error performance parameters and objectives for multi-operator international paths within the Optical Transport Network (OTN)	Pre-published.
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.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 ITU-T Recommendation G.767 Digital Circuit Multiplication Equipment (DCME)	
G.Sup39	10-2003	Optical system design and engineering considerations	Pre-published.

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Number	Approved in	Title	Status
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	05-1999	Frame structure for a 64 to 1920 kbit/s channel in audiovisual teleservices *Covering note, May 2000: Erratum*	
H.221 Erratum 1	12-2000	Erratum to Recommendation ITU-T H.221 (05/99)	
H.222.0	02-2000	Information technology - Generic coding of moving pictures and associated audio information: Systems *This edition of ITU-T H.222.0 consolidates H.222.0 (07/1995) and its Amendments 1 and 2 (11/1996), 3 and 4 (02/1998), 5 and 6 (05/1999), 7 (02/2000) and Corrigendum 1 (02/1998)*	
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	*This amendment includes the correction introduced by H.222.0 (2000) Amend.1/Cor.1 (2003)*	
H.222.0 Amendment 2	06-2003	Support of IPMP on MPEG-2 systems	
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H.223	07-2001	Multiplexing protocol for low bit rate multimedia communication	
H.224	02-2000	A real time control protocol for simplex applications using the H.221 LSD/HSD/HLP channels	
H.225.0	07-2003	Call signalling protocols and media stream packetization for packet-based multimedia communication systems	Pre-published.
H.226	09-1998	Channel aggregation protocol for multilink operation on circuit-switched networks	
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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	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	Pre-published.

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	Procedures for establishing communication between three or more audiovisual terminals using digital channels up to 1920 kbit/s	
H.244	07-1995	Synchronized aggregation of multiple 64 or 56 kbit/s channels	
H.245	07-2003	Control protocol for multimedia communication	Pre-published.
H.246	02-1998	Interworking of H-Series multimedia terminals with H-Series multimedia terminals and voice/voiceband terminals on GSTN and ISDN	
H.246 Annex C	07-2003	ISDN User Part function - H.225.0 interworking	Pre-published.
H.246 Annex E1	11-2000	General Inter-Working Function (IWF) between Mobile Application Part and H.225.0	
H.246 Annex E2	11-2000	Annex E2: ANSI-41 (Americas) Mobile Application Part and H.225.0 interworking	
H.246 Annex F	07-2001	H.323 - H.324 interworking	
H.247	09-1998	Multipoint extension for broadband audiovisual communication systems and terminals	
H.248.1	05-2002	Gateway control protocol: Version 2	
H.248.2	11-2000	Gateway control protocol: Facsimile, text conversation and call discrimination packages *This Recommendation was first approved and published as Annex F to H.248, and then renumbered as H.248.2 on 2002-03-29 without further modification*	
H.248.3	11-2000	Gateway control protocol: User interface elements and actions packages *This Recommendation was first approved and published as Annex G to H.248, and then renumbered as H.248.3 on 2002-03-29 without further modification*	
H.248.4	11-2000	Gateway control protocol: Transport over Stream Control Transmission Protocol (SCTP) *This Recommendation was first approved and published as Annex H to H.248, and then renumbered as H.248.4 on 2002-03-29 without further modification*	
H.248.5	11-2000	Gateway control protocol: Transport over ATM *This Recommendation was first approved and published as Annex I to H.248, and then renumbered as H.248.5 on 2002-03-29 without further modification*	
H.248.6	11-2000	Gateway control protocol: Dynamic Tone Definition package *This Recommendation was first approved and published as Annex J to H.248, and then renumbered as H.248.6 on 2002-03-29 without further modification*	
H.248.7	11-2000	Gateway control protocol: Generic announcement package *This Recommendation was first approved and published as Annex K to H.248, and then renumbered as H.248.7 on 2002-03-29 without further modification*	
H.248.8	03-2002	Gateway control protocol: Error code and service change reason description *The former Annex L to H.248 was renumbered as H.248.8 when revised on 2002-03-29*	
H.248.9	03-2002	Gateway control protocol: Advanced media server packages *Drafted as H.248 Annex M1, renumbered and published as H.248.9*	
H.248 Annex M2	07-2001	Annex M2: Media Gateway resource congestion handling package *This Annex was renumbered as H.248.10 on 2002-03-29 without further modification*	
H.248.11	11-2002	Gateway control protocol: Media gateway overload control package	
H.248 Annex M4	07-2001	This annex was renumbered as H.248.12 on 2002-03-29 without further modification *This Annex was renumbered as H.248.12 on 29-03-2002 without further modification*	
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 *Drafted as H.248 Annex M5, renumbered and published as H.248.13*	
H.248.14	03-2002	Gateway control protocol: Inactivity timer package	

H.248.15	03-2002	Gateway control protocol: SDP H.248 package attribute *Drafted as H.248 Annex N, renumbered and published as H.248.15*	
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H.248.26	07-2003	Gateway control protocol: Enhanced analog line packages	
H.248.27	07-2003	Gateway control protocol: Supplemental tones packages	
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 *This edition of ITU-T H.262 consolidates H.262 (07/1995) and its Amendments 1 and 2 (11/1996), 3 and 4 (02/1998), 5 (05/1999), 6 (02/2000) and Corrigenda 1 and 2 (11/1996)*	
H.262 (2000) Technical Cor. 1	11-2000		
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H.263	02-1998	Video coding for low bit rate communication	
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H.310	09-1998	Broadband audiovisual communication systems and terminals	
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H.323	07-2003	Packet-based multimedia communications systems *This version 5 of H.323 integrates without further modifications Annexes M3 (07/2001), P (01/2003), Q (07/2001) and R (07/2001) that were published separately, and Annex O that was approved independently on 07/2003*	Pre-published.
H.324	03-2002	Terminal for low bit-rate multimedia communication	

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H.450.2	02-1998	Call transfer supplementary service for H.323	
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H.450.5	05-1999	Call park and call pickup supplementary services for H.323 *Covering note, May 2000: Erratum*	
H.450.5 Erratum 1	05-2000	Erratum to Recommendation ITU-T H.450.5 (05/99)	
H.450.5 Erratum 2	04-2002	Erratum 2	
H.450.6	05-1999	Call waiting supplementary service for H.323	
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H.610	07-2003	Full-Service VDSL - System architecture and customer premises equipment	Pre-published.
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 *This Supplement includes one CD-ROM containing the video clip "Irene" to be used as test material for video coding of sign language.*	
H.Sup2	05-2003	H.248.x sub-series packages guide - Release 4	
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I.231.10	08-1992	Circuit-mode bearer service categories : Circuit-mode multiple-rate unrestricted 8 kHz structured bearer service	
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I.310	03-1993	ISDN - Network functional principles	
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I.311 (1996) Amendment 1	03-2000		
Q.1201/I.312	10-1992	Principles of intelligent network architecture *This Recommendation is published with the double number Q.1201 and I.312*	
I.312/Q.1201	10-1992	Principles of intelligent network architecture *This Recommendation is published with the double number Q.1201 and I.312*	
I.313	09-1997	B-ISDN network requirements	
I.320	11-1993	ISDN protocol reference model	
I.321	04-1991	B-ISDN protocol reference model and its application *Covering note, May 2000: Erratum*	
I.322	02-1999	Generic protocol reference model for telecommunication networks	
I.324	10-1991	ISDN network architecture	
I.325	03-1993	Reference configurations for ISDN connection types	
I.326	03-2003	Functional architecture of transport networks based on ATM	
I.327	03-1993	B-ISDN functional architecture	
Q.1202/I.328	09-1997	Intelligent network - Service plane architecture *This Recommendation is published with the double number Q.1202 and I.328*	
I.328/Q.1202	09-1997	Intelligent network - Service plane architecture *This Recommendation is published with the double number Q.1202 and I.328*	
Q.1203/I.329	09-1997	Intelligent network - Global functional plane architecture *This Recommendation is published with the double number Q.1203 and I.329. For more details see I.329*	
I.329/Q.1203	09-1997	Intelligent network - Global functional plane architecture *This Recommendation is published with the double number Q.1203 and I.329. For more details see I.329*	
I.330	11-1988	ISDN numbering and addressing principles	
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I.340	11-1988	ISDN connection types	
I.350	03-1993	General aspects of quality of service and network performance in digital networks, including ISDNs	
Y.801/Y.1501/I.351	10-2000	Relationships among ISDN, Internet protocol, and GII performance recommendations	
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I.352	03-1993	Network performance objectives for connection processing delays in an ISDN	
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I.359	02-1999	Accuracy and dependability of ISDN 64 kbit/s circuit-mode connection types	
I.361	02-1999	B-ISDN ATM layer specification	
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I.364	02-1999	Support of the broadband connectionless data bearer service by the B-ISDN	
I.365.1	11-1993	B-ISDN ATM adaptation layer sublayers : Frame relaying service specific convergence sublayer (FR-SSCS)	
I.365.2	11-1995	B-ISDN ATM adaptation layer sublayers : Service-specific coordination function to provide the connection-oriented network service	
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I.365.4	08-1996	B-ISDN ATM adaptation layer sublayers : Service-specific convergence sublayer for HDLC applications	
I.366.1	06-1998	Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2	
I.366.2	11-2000	AAL type 2 service specific convergence sublayer for narrow-band services	
I.366.2 (2000) Corrigendum 1	03-2002	Corrigendum 1	
I.370	10-1991	Congestion management for the ISDN frame relaying bearer service	
I.371	03-2000	Traffic control and congestion control in B-ISDN	
I.371.1	11-2000	Guaranteed frame rate ATM transfer capability	
I.372	03-1993	Frame relaying bearer service network-to-network interface requirements	
I.373	03-1993	Network capabilities to support universal personal telecommunication (UPT)	
I.375.1	06-1998	Network capabilities to support multimedia services : General aspects	
I.375.2	06-1998	Network capabilities to support multimedia services : Example of multimedia retrieval service class - Video-on-demand service using an ATM based network	
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I.381	03-2001	ATM Adaptation Layer (ALL) performance	
I.410	11-1988	General aspects and principles relating to Recommendations on ISDN user-network interfaces	
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I.432.1	02-1999	B-ISDN user-network interface - Physical layer specification : General characteristics	
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I.432.4	02-1999	B-ISDN user-network interface - Physical layer specification : 51 840 kbit/s operation	
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I.460	02-1999	Multiplexing, rate adaption and support of existing interfaces	
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I.470	11-1988	Relationship of terminal functions to ISDN	
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I.510	03-1993	Definitions and general principles for ISDN interworking	
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I.515	03-1993	Parameter exchange for ISDN interworking	
I.520	03-1993	General arrangements for network interworking between ISDNs	
I.525	08-1996	Interworking between networks operating at bit rates less than 64 kbit/s with 64 kbit/s-based ISDN and B-ISDN	
I.530	03-1993	Network interworking between an ISDN and a public switched telephone network (PSTN)	
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I.580	11-1995	General arrangements for interworking between B-ISDN and 64 kbit/s based ISDN	
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I.610	02-1999	B-ISDN operation and maintenance principles and functions	
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I.620	10-1996	Frame relay operation and maintenance principles and functions	
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I.731	10-2000	Types and general characteristics of ATM equipment	
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I.761	03-2000	Inverse multiplexing for ATM (IMA)	
I.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	

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

Number	Approved in	Title	Status
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 *Formerly ITU-R Rec. CMTT 502-2*	
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 *Formerly ITU-R Rec. CMTT 571-2*	
J.21	08-1994	Performance characteristics of 15 kHz-type sound-programme circuits - Circuits for high quality monophonic and stereophonic transmissions *Formerly ITU-R Rec. CMTT 505-5*	
J.23	11-1988	Performance characteristics of 7 kHz type (narrow bandwidth) sound-programme circuits *Formerly ITU-R Rec. CMTT 503-4*	
J.24	02-1982	Modulation of signals carried by sound-program circuits by interfering signals from power supply sources *Published as ITU-R Rec. CMTT 474-1 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.25	05-1986	Estimation of transmission performance of sound-programme circuits shorter or longer than the hypothetical reference circuit *Published as ITU-R Rec. CMTT 605-1 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.26	06-1990	Test signals to be used on international sound-programme connections *Published as ITU-R Rec. CMTT 645-1 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.27	06-1990	Signals for the alignment of international sound-programme connections *Published as ITU-R Rec. CMTT 661-1 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
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 *Formerly ITU-R Rec. CMTT 659-1*	
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	
J.53	05-2000	Sampling frequency to be used for the digital transmission of high-quality sound-programme signals	

J.54	05-1986	*Published as ITU-R Rec. CMTT 660 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
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 *Published as ITU-R Rec. CMTT 718 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.57	06-1990	Transmission of digital studio quality sound signals over H1 channels *Published as ITU-R Rec. CMTT 724 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.61	06-1990	Transmission performance of television circuits designed for use in international connections *Published as ITU-R Rec. CMTT 567-3 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.62	02-1978	Single value of the signal-to-noise ratio for all television systems *Published as ITU-R Rec. CMTT 568 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.63	06-1990	Insertion of test signals in the field-blanking interval of monochrome and colour television signals *Published as ITU-R Rec. CMTT 473-5 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.64	02-1986	Definitions of parameters for simplified automatic measurement of television insertion test signals *Published as ITU-R Rec. CMTT 569-2 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.65	02-1978	Standard test signal for conventional loading of a television channel *Published as ITU-R Rec. CMTT 570 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
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 *Published as ITU-R Rec. CMTT 572 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
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 *Published as ITU-R Rec. CMTT 603 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.80	09-1993	Transmission of component-coded digital television signals for contribution-quality applications at bit rates near 140 Mbit/s *Formerly ITU-R Rec. CMTT 721-2*	
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 *Formerly ITU-R Rec. CMTT.723-1*	
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	Corrigendum 1	
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 *Covering note, 3.08.1998: Corrigendum*	
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 *Published as ITU-R Rec. CMTT 604-2 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	

J.86	06-1990	*Published as ITU-R Rec. CMTT 658-1 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.87	03-2001	Use of hybrid cable television links for the secondary distribution of television into the user's premises	
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	
J.91	08-1994	Technical methods for ensuring privacy in long-distance international television transmission	
J.92	04-1997	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCE's	
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 2	03-2001	Additions to 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 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 *Published as ITU-R Rec. CMTT 717 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
J.101	06-1990	Measurement methods and test procedures for teletext signals *Published as ITU-R Rec. CMTT 720 in CCIR Recommendations, Volume XII, Düsseldorf, 1990*	
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 *Guidelines for the implementation of Rec. J.111 may be found in Supplement 3 to J series (1998).*	
J.112	03-1998	Transmission systems for interactive cable television services *Example of linking options between annexes of Rec. J.112 and annexes of Rec. J.83 may be found in Supplement 1 to J series (1998). Guidelines for the implementation of annex A of Rec. J.112 may be found in Supplement 2 to J series (1998).*	
J.112 Annex A	03-2001	Digital video broadcasting: DVB interaction channel for cable TV distribution systems	
J.112 Annex B	03-2001	Data-over-cable service interface specifications: Radio frequency interface specification	
J.112 Annex B (2001) Amendment 1	02-2002	Data-over-cable service interface specifications: Radio-frequency interface specification	
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	
J.117	09-1999	Home digital network interface specification	
J.118	05-2000	Access systems for interactive services on SMATV/MATV networks	

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 TCP/IP network	
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	03-2001	Objective perceptual video quality measurement techniques for digital cable television in the presence of a full reference	
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.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	Operational functionalities for the delivery of digital multiprogramme television, sound and data services through multichannel, multipoint distribution systems (MMDS)	
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	03-2001	Network call signalling protocol for the delivery of time critical services over cable television networks using cable modems	
J.162 (2001) Amendment 1	02-2002		
J.163	03-2001	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.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.180	05-2000	User requirements for statistical multiplexing of several programmes on a transmission channel	
J.181	03-2001	Digital program insertion cueing message for cable television systems	
J.181 (2001) Amendment 1	04-2003	New Appendix I: Recommended practices and interpretation guide	
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	
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	07-2002	IP Feature Package to enhance cable modems	
J.200	03-2001	Worldwide common core - Application environment for digital interactive television services	
J.202	05-2003	Harmonization of precedural content formats for interactive TV applications	
J.Sup1	11-1998	Example of linking options between annexes of ITU-T Recommendation J.112 and annexes of ITU-T Recommendation J.83	
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	

Series K: Protection against interference

Number	Approved in	Title	Status
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.21	07-2003	Resistibility of telecommunication equipment installed in costumer premises to overvoltages and overcurrents	
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	
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	03-1993	Positive temperature coefficient (PTc) thermistors	
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.42	05-1998	Preparation of emission and immunity requirements for telecommunication equipment - General principles	
K.43	07-2003	Immunity requirements for telecommunication equipment	
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	02-2000	Guidance on complying with limits for human exposure to electromagnetic fields	
K.53	02-2000	Values of induced voltages on telecommunication installations to establish telecom and a.c. power and railway operators responsibilities	
K.54	10-2000	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 procedure 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	

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

Number	Approved in	Title	Status
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 *The electronic copy of this Recommendation is freely available on ITU website*	
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/xDSL	Pre-published.
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	
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.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	Pre-published.
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	Performance requirements for passive optical nodes: Optical distribution frames in central office environments	Pre-published.
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 Network (PON)	Pre-published.
L.53	05-2003	Optical fibre maintenance criteria for access networks	
L.55	11-2003	Digital database for underwater cables	Pre-published.
L.56	05-2003	Installation of optical fibre cable along railways	
L.57	05-2003	Air-assisted installation of optical fibre cables	

Series M: TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits

Number	Approved in	Title	Status
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.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	
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.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	
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	Performance monitoring on international transmission systems and equipment	
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	
V.51/M.729	11-1988	Organization of the maintenance of international public switched telephone circuits used for data transmission *This Recommendation is also included but not published in V series under alias number V.51*	
M.729	11-1988	Organization of the maintenance of international public switched telephone circuits used for data transmission *This Recommendation is also included but not published in V series under alias number V.51*	
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.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	
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	
M.1010	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 on 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 special quality international leased circuits with basic bandwidth conditioning	
M.1030	11-1988	Characteristics of ordinary quality international leased circuits forming part of private switched telephone networks	
M.1040	11-1988	Characteristics of ordinary quality international leased circuits	
M.1045	05-1996	Preliminary exchange of information for the provision of international leased circuits and international data transmission systems	
M.1050	06-1998	Lining up an international point-to-point leased circuit with analogue presentation to the user	
M.1055	11-1988	Lining up an international multiterminal leased circuit	
M.1060	11-1988	Maintenance of international leased circuits	
M.1130	10-1992	General definitions and general principles of operation/maintenance procedures to be used in satellite mobile systems	
M.1140	10-1992	Maritime mobile telecommunication services via satellite *Replaces M.1100, M.1110, M.1120*	
M.1150	04-1997	Maintenance aspects of maritime/land mobile telecommunication store-and-forward services (packet mode) via satellite	
M.1160	04-1997	Maintenance aspects of aeronautical mobile telecommunication service via satellite	
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 (2000) Corrigendum 1	08-2001		
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.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	Pre-published.
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)	
M.1539	03-1999	Management of the grade of network maintenance services at the maintenance service customer contact point (MSCC)	
M.1540	10-1994	Exchange of information for planned outages of transmission systems	
M.1550	10-1992	Escalation procedure	
M.1560	10-1992	Escalation procedure for international leased circuits	
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 international ATM permanent and semi-permanent virtual path and virtual path connection	
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	Pre-published.
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	Pre-published.
M.3013	02-2000	Considerations for a telecommunications management network	
M.3016	06-1998	TMN security overview	
M.3017	06-2003	Framework for the integrated management of hybrid circuit/packet networks	
M.3020	02-2000	TMN Interface Specification Methodology	

M.3100	07-1995	Generic network information model	
M.3100 (1995) Corrigendum 1	06-1998	Corrigendum 1	
M.3100 (1995) Amendment 1	03-1999		
M.3100 (1995) Amendment 2	02-2000	Enhancement of M.3100	
M.3100 (1995) Corrigendum 2	01-2001		
M.3100 (1995) Amendment 3	01-2001	Definition of the management interface for a generic alarm reporting control (ARC) feature	
M.3100 (1995) Corrigendum 3	08-2001		
M.3100 (1995) Amendment 4	08-2001	Definition of the management interface for a bridge?and?roll cross-connect feature	
M.3100 (1995) Amendment 5	08-2001	Enhanced cross-connect model	
M.3100 (1995) Amendment 6	03-2003		
M.3100 (1999) Amendment 7	12-2003		Pre-published.
M.3101	07-1995	Managed object conformance statements for the generic network information model	
M.3108.1	03-1999	TMN management services for dedicated and reconfigurable circuits network: Information model for management of leased circuit and reconfigurable services	
M.3108.1 (1999) Corrigendum 1	01-2001	Information model for management of leased circuit and reconfigurable services	
M.3108.2	02-2000	TMN management services for dedicated and reconfigurable circuits network: Information model for connection management of preprovisioned service link connections to form a reconfigurable leased service	
M.3108.3	01-2001	TMN management services for dedicated and reconfigurable circuits network: Information model for management of virtual private network service	
M.3120 (2001) Amendment 1	05-2002	Protection Switching	
M.3120 (2001) Amendment 2	03-2003		
M.3180	10-1992	Catalogue of TMN management information	
M.3200	04-1997	TMN management services and telecommunications managed areas: overview	
M.3207.1	05-1996	TMN management service: maintenance aspects of B-ISDN management	
M.3208.1	10-1997	TMN management services for dedicated and reconfigurable circuits network : Leased circuit services	
M.3208.1 (1997) Corrigendum 1	02-2000	Corrigendum 1	
M.3208.2	03-1999	TMN management services for dedicated and reconfigurable circuits network	

M.3208.2 (1999) Corrigendum 1	01-2001		
M.3208.3	02-2000	TMN management services for dedicated and reconfigurable circuits network : Virtual private network	
M.3210.1	01-2001	TMN management services for IMT-2000 security management	
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	Pre-published.
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 No. 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	

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

Number	Approved in	Title	Status
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	
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	

Series O: Specifications of measuring equipment

Number	Approved in	Title	Status
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 *This Recommendation is also included but not published in P series under alias number P.53*	
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	
V.55/O.71	11-1988	Impulsive noise measuring equipment for telephone-type circuits *This Recommendation is also included but not published in V series under alias number V.55*	
O.71	11-1988	Impulsive noise measuring equipment for telephone-type circuits *This Recommendation is also included but not published in V series under alias number V.55*	
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 *Covering note, May 2000: Erratum Formerly published as Supplement 3.7 in the Blue Book (1988), Fascicle IV.4, and then renumbered on 26 June 1998 as Appendix I to ITU-T O.81 without further modification.*	
O.81 App 1 Err 1	06-2000	Erratum to Recommendation ITU-T O.81/Appendix I (06/98)	
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	
O.150 (1996) Corrigendum 1	05-2002	General requirements for instrumentation for performance measurements on digital transmission equipment	
O.151	10-1992	Error performance measuring equipment operating at the primary rate and above	
O.151 (1992) Corrigendum 1	05-2002	Error performance measuring equipment operating at the primary rate and above	

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	03-2001	Jitter and wander measuring equipment for digital systems which are based on the synchronous digital hierarchy (SDH)	
O.172 (2001) Amendment 1	03-2003	Jitter and wander measuring equipment for digital systems which are based on the synchronous digital hierarchy (SDH) Amendment 1	
O.173	03-2003	Jitter measuring equipment for digital systems which are based on the Optical Transport Network (OTN)	
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	

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

Number	Approved in	Title	Status
P.10	12-1998	Vocabulary of terms on telephone transmission quality and telephone sets	
P.10 (1998) Amendment 1	11-2003	Annex A to Recommendation P.10 - List of psychoacoustic parameters	Pre-published.
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.38	03-1993	Transmission characteristics of operator telephone systems (OTS)	
P.48	11-1988	Specification for an intermediate reference system	
P.50	09-1999	Artificial voices *Covering note, May 2000: Erratum*	
P.50 Erratum 1	05-2000	Erratum to Recommendation ITU-T P.50 (09/99)	
P.51	08-1996	Artificial mouth	
P.52	03-1993	Volume meters	
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 *Corresponding ANSI-C code is available in the SV56 module of the ITU-T G.191 Software Tools Library*	
P.57	07-2002	Artificial ears	
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 *Covering note, May 2000: Erratum*	
P.64 Erratum 1	05-2000	Erratum to Recommendation ITU-T P.64 (09/99)	
P.75	11-1988	Standard conditioning method for handsets with carbon microphones	
P.76	11-1988	Determination of loudness ratings; fundamental principles	
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 *Covering note, May 2000: Erratum Covering note, 24 October 2000: Corrigendum 1*	
P.79 Erratum 1	05-2000	Erratum to Recommendation ITU-T P.79 (09/99)	
P.79 (1999) Corrigendum 1	10-2000	Corrigendum 1	
P.79 (1999) Corrigendum 2	05-2001	Corrigendum No. 2 to Recommendation ITU-T P.79 (09/99)	
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.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	09-1999	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 of hands-free telephones	
P.341	02-1998	Transmission characteristics for wideband (150-7000 Hz) digital hands-free telephony terminals	
P.341 (1998) Corrigendum 1	09-1999	Corrigendum 1	
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 - Formerly ITU-T P.35	
P.360	12-1998	Efficiency of devices for preventing the occurrence of excessive acoustic pressure by telephone receivers *Former Rec. P.36, renumbered P.360*	
P.370	08-1996	Coupling Hearing Aids to Telephone sets *Former Rec. P.37, renumbered P.370*	
P.380	11-2003	Electro-acoustic measurements on headsets	Pre-published.
P.501 Erratum 1	09-2001	Erratum to Recommendation ITU-T P.501 (05/00)	
P.502	05-2000	Objective test methods for speech communication systems using complex test signals	
P.502 Erratum 1	07-2001	Erratum to Recommendation ITU-T P.502 (05/00)	
P.561	07-2002	In-service non-intrusive measurementdevice - Voice service measurements	
P.562	05-2000	Analysis and interpretation of INMD voice-services measurements	
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 *Former Rec. P.80*	
P.800.1	03-2003	Mean Opinion Score (MOS) terminology	
P.810	02-1996	Modulated noise reference unit (MNRU) *Corresponding ANSI-C code is available in the MNRU module of the ITU-T G.191 Software Tools Library*	
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.835	11-2003	Subjective test methodology for evaluating speech communication systems that include noise suppression algorithm	Pre-published.
P.840	11-2003	Subjective listening test method for evaluating circuit multiplication equipment *Former ITU-T P.84*	Pre-published.
P.851	11-2003	Subjective quality evaluation of telephone services based on spoken dialogue systems	Pre-published.
P.862.1	11-2003	Mapping function for transforming P.862 raw result scores to MOS-LQO	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	Corrigendum 1	

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.supp10	11-1988	Considerations relating to transmission characteristics for analogue handset telephones	
P.supp16	11-1988	Guidelines for placement of microphones and loudspeakers in telephone conference rooms [1] and for Group Audio Terminals (GATs)	
P.supp20	03-1993	Examples of measurements of handset receive-frequency responses: dependence on earcap leakage losses	
P.Sup23	02-1998	ITU-T coded-speech database *n purposes*	

Series Q: Switching and signalling

Number	Approved in	Title	Status
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.165/Q.11 *ter*	11-1988	Timetable for coordinated implementation of the full capability of the numbering plan for the ISDN era (Recommendation E.164) *This Recommendation is also published under alias number Q.11 ter*	
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	
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 *This Recommendation is published with the double number E.180 and Q.35*	
Q.44	11-1988	Attenuation distortion	
Q.45	10-1984	Transmission characteristics of an analogue international exchange	
Q.45*bis*	11-1988	Transmission characteristics of an analogue international exchange	
Q.48	11-1988	Demand assignment signalling systems	
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	

Q.52	03-2001	Signalling between international switching centres and stand-alone echo control devices	
Q.55	12-1999	Signalling between signal processing network equipment (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	
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	
Q.81.1	11-1988	Stage 2 description for number identification supplementary services : Direct dialling-in	
Q.81.2	02-1992	Stage 2 description for number identification supplementary services : Multiple subscriber number *Published with ITU-T Q.81.8.*	
Q.81.3	09-1991	Stage 2 description for number identification supplementary services : Calling line identification presentation (CLIP) and calling line identification restriction (CLIR) *Published with ITU-T Q.81.5.*	
Q.81.5	09-1991	Stage 2 description for number identification supplementary services : Connected line identification, presentation and restriction (COLP) and (COLR) *Published with ITU-T Q.81.3.*	
Q.81.7	06-1997	Stage 2 description for number identification supplementary services : Malicious call identification (MCID) *This subject was only recognised and is for further study*	
Q.81.8	02-1992	Stage 2 description for number identification supplementary services : Sub-addressing (SUB) *Published with ITU-T Q.81.2.*	
Q.82.2	03-1993	Stage 2 description for call offering supplementary services : Call forwarding *Published with ITU-T Q.82.3.*	
Q.82.3	03-1993	Stage 2 description for call offering supplementary services : Call deflection *Published with ITU-T Q.82.2.*	
Q.82.4	11-1988	Stage 2 description for call offering supplementary services : Line hunting	
Q.82.7	07-1996	Stage 2 description for call offering supplementary services : Explicit call transfer	
Q.83.1	09-1991	Stage 2 description for call completion supplementary services : Call waiting (CW) *Published with ITU-T Q.83.4.*	
Q.83.2	02-1992	Stage 2 description for call completion supplementary services : Call hold	
Q.83.3	11-1988	Stage 2 description for call completion supplementary services : Completion of call to busy subscriber *Empty Recommendation. This service has only been identified and requires further study.*	
Q.84.1	03-1993	Stage 2 description for multiparty supplementary services : Conference calling (CONF)	
Q.84.2	10-1995	Stage 2 description for multiparty supplementary services : Three-party service	
Q.85.1	02-1992	Stage 2 description for community of interest supplementary services : Closed user group *Published with ITU-T Q.85.3.*	
Q.85.3	02-1992	Stage 2 description for community of interest supplementary services : Multi-level precedence and preemption (MLPP) *Published with ITU-T Q.85.1.*	
Q.85.6	02-1995	Stage 2 description for community of interest supplementary services : Global Virtual Network Service (GVNS)	

Q.86.2	10-1995	Stage 2 description for charging supplementary services : Advice of charge (AOC)	
Q.86.3	03-1993	Stage 2 description for charging supplementary services : Reverse charging (REV)	
Q.86.4	06-1997	Stage 2 description for charging supplementary services : International Freephone Service (IFS)	
Q.86.7	10-1995	Stage 2 description for charging supplementary services : International Telecommunication Charge Card (ITCC)	
Q.87.1	03-1993	Stage 2 description for additional information transfer supplementary services : User-to-user signalling (UUS)	
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.107*bis*	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	
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Series R: Telegraph transmission

Number	Approved in	Title	Status
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 19200 bit/s modem standarized 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.35*bis*	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	
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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*bis*	11-1988	Standardized text for testing the elements of a complete circuit	
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R.54	03-1993	Conventional degree of distortion tolerable for standardized start-stop 50-baud systems	
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R.56	03-1993	Telegraph distortion limits to be quoted in Recommendations for equipment and transmission plans	

		networks using 50-baud start-stop equipment	
R.58	11-1988	Standard limits of transmission quality for the gentex and telex networks	
R.58*bis*	11-1988	Limits on signal transfer delay for telegraph, telex and gentex networks	
R.59	11-1988	Interface requirements for 50-baud start-stop telegraph transmission in the maritime mobile satellite service	
R.60	11-1988	Conditions to be fulfilled by regenerative repeaters for start-stop signals of International Telegraph Alphabet No. 2	
R.62	11-1988	Siting of regenerative repeaters in international telex circuits	
R.70	11-1988	Designation of international telegraph circuits	
R.70*bis*	11-1988	Numbering of international VFT channels	
R.71	11-1988	Organization of the maintenance of international telegraph circuits	
R.72	11-1988	Periodicity of maintenance measurements to be carried out on the channels of international VFT systems	
R.73	11-1988	Maintenance measurements to be carried out on VFT systems	
R.74	11-1988	Choice of type of telegraph distortion-measuring equipment	
R.75	11-1988	Maintenance measurements on code-independent international sections of international telegraph circuits	
R.75*bis*	11-1988	Maintenance measurements of character error rate on international sections of international telegraph circuits	
R.76	11-1988	Reserve channels for maintenance measurements on channels of international VFT systems	
R.77	11-1988	Use of bearer circuits for voice-frequency telegraphy	
R.78	11-1988	Pilot channel for AMVFT systems	
R.79	11-1988	Automatic tests of transmission quality on telegraph circuits between switching centres	
R.80	11-1988	Causes of disturbances to signals in VFT channels and their effect on telegraph distortion	
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.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	

Series S: Telegraph services terminal equipment

Number	Approved in	Title	Status
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	
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	

S.140	11-1988	Definitions of essential technical terms relating to apparatus for alphabetic telegraphy	
S.supp1	11-1988	Minimal specifications for the bilingual (arabic/latin) teleprinter	

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Series T: Terminals for telematic services

Number	Approved in	Title	Status
T.0	07-1996	Classification of facsimile terminals for document transmission over the public networks	
T.1	11-1988	Standardization of phototelegraph apparatus	
T.5/G.511	02-1998	Test methodology for Group 3 facsimile processing equipment in the Public Switched Telephone Network *This Recommendation was renumbered as ITU-T Rec. T.5 on 2002-02-15 without further modification*	
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.10*bis*	11-1988	Document facsimile transmissions in the general switched telephone network	
T.22	03-1993	Standardized test charts for document facsimile transmissions *Figures reproducing test charts in T.22 Annex A are not suited for measurements. Original test charts are available from ITU sales department.*	
T.23	04-1994	Standardized colour test chart for document facsimile transmissions *Figure reproducing test charts in T.23 Annex A is not suited for measurements. Original test chart is available from ITU sales department.*	
T.24	06-1998	Standardized digitized image set *. T.24 text is downloadable free of charge for information purpose. The specimens reproduced inside this text are given for illustration purposes and are not suitable for measurements.*	
T.30	07-2003	Procedures for document facsimile transmission in the general switched telephone network	Pre-published.
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 *Covering Note 30.10.1997: Corrigendum*	
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		
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 3	11-2002		
T.39	10-1997	Application profiles for simultaneous voice and facsimile terminals	
T.42	07-2003	Continuous-tone colour representation method for facsimile	
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	04-1999	Mixed raster content (MRC)	

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.62*bis*	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	
T.81	09-1992	Information technology - Digital compression and coding of continuous-tone still images - Requirements and guidelines	
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.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	*Covering note: 7 February 2000: French, Spanish only.*	
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) *Covering note, February 1999: Corrigendum*	
T.88	02-2000	Information technology - Coded representation of picture and audio information - Lossy/lossless coding of bi-level images	
T.88 (2000) Amendment 1	06-2003		Pre-published.
T.88 (2000) Amendment 2	06-2003	Extension of adaptive templates for halftone coding	
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 2	07-1996		
T.90 (1992) Amendment 3	06-1998	Cause value for a G4 fax fallback	
T.100	11-1988	International information exchange for interactive videotex	
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.140	02-1998	Protocol for multimedia application text conversation	
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	
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 (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		
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	Amendment 2	
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.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	A 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	
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	Communication application profile BT0 for document bulk transfer based on the session service - Amendment 1	
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	Corrigendum 1	
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.803	11-2002	Information technology – JPEG 2000 image coding system: Conformance testing	Pre-published.

Series U: Telegraph switching

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

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 *This Recommendation is also included but not published in I series under alias number I.560*	
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	
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	

Series V: Data communication over the telephone network

Number	Approved in	Title	Status
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.8*bis*	11-2000	ype circuits	
V.10	03-1993	Electrical characteristics for unbalanced double-current interchange circuits operating at data signalling rates nominally up to 100 kbit/s *This Recommendation is also included but not published in X series under alias number X.26.*	
V.11	10-1996	Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s *This Recommendation is also included but not published in X series under alias number X.27*	
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	Corrigendum 1	
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	Corrigendum 1	
V.18	11-2000	Operational and interworking requirements for DCEs operating in the text telephone mode	
V.18 (2000) Amendment 1	11-2002		
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	
V.22*bis*	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.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)	07-2001	Automatic answering equipment and general procedures for automatic calling	

V.25*bis*	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.26*bis*	11-1988	2400/1200 bits per second modem standardized for use in the general switched telephone network	
V.26*ter*	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.27*bis*	11-1988	4800/2400 bits per second modem with automatic equalizer standardized for use on leased telephone-type circuits	
V.27*ter*	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.31*bis*	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.32*bis*	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	
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.42*bis*	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/V.51	11-1988	Organization of the maintenance of international public switched telephone circuits used for data transmission *This Recommendation is also included but not published in V series under alias number V.51*	
V.53	11-1988	Limits for the maintenance of telephone-type circuits used for data transmission	

O.71/V.55	11-1988	Impulsive noise measuring equipment for telephone-type circuits *This Recommendation is also included but not published in V series under alias number V.55*	
V.56	11-1988	Comparative tests of modems for use over telephone-type circuits	
V.56*bis*	08-1995	Network transmission model for evaluating modem performance over 2-wire voice grade connections	
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 DCE's	
V.59 (2000) Corrigendum 1	07-2001	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCES	
V.59 (2000) Corrigendum 2	03-2002	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCEs	
V.61	08-1996	t-to-point 2-wire telephone type circuits	
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	
V.75	08-1996	DSVD terminal control procedures	
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.80	08-1996	In-band DCE control and synchronous data modes for asynchronous DTE	
V.80 (1996) Amendment 1	07-2001	ITU-T Amendment 1 (07/01) to Recommendation V.80 - In-Band DCE Control and Synchronous Data Modes for Asynchronous DTE	
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	Corrigendum 1	
V.92	11-2000	Enhancements to Recommendation V.90	
V.92 (2000) Amendment 1	07-2001	ITU-T Amendment 1 (07/01) to Recommendation V.92 - Enhancements to Recommendation V.90	
V.92 (2000) Amendment 2	03-2002	Enhancements to Recommendation V.90	
V.92 (2000) Corrigendum 1	07-2003	Enhancements to Recommendation V.90	
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 *This Recommendation is also included but not published in I Series under alias number I.463.*	
V.120	10-1996	Support by an ISDN of data terminal equipment with V-Series type interfaces with provision for statistical multiplexing *This Recommendation is also included but not published in I series under alias number I.465*	
V.120 (1996) Corrigendum 1	05-1999	Corrigendum 1	
V.130	08-1995	ISDN terminal adaptor framework	
V.140	02-1998	Procedures for establishing communication between two multiprotocol audiovisual terminals using digital channels at a multiple of 64 or 56 kbit/s	
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	Pre-published.

Corrigendum 1		network	
V.230	11-1988	General data communications interface layer 1 specification	
V.250	07-2003	Serial asynchronous automatic dialling and control	Pre-published.
V.250 Supplement 1	06-2001	Various extensions to V.250 basic command set	
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	

Series X: Data networks and open system communication

Number	Approved in	Title	Status
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	03-2000	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.20*bis*	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.21*bis*	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		
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	
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) *This Recommendation is also included but not published in I series under alias number I.461*	
X.31	11-1995	Support of packet mode terminal equipment by an ISDN *This Recommendation is also included but not published in I series under alias number I.462*	
X.32	10-1996	es digital network or a circuit-switched public data network	
X.33	10-1996	Access to packet-switched data transmission services via frame relaying data	

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	Pre-published.
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.50*bis*	11-1988	Fundamental parameters of a 48-kbit/s user data signalling rate transmission scheme for the international interface between synchronous data networks	
X.51	11-1988	Fundamental parameters of a multiplexing scheme for the international interface between synchronous data networks using 10-bit envelope structure	
X.51*bis*	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)	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.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	
Y.1321/X.85	03-2001	IP over SDH using LAPS	
X.85/Y.1321	03-2001	IP over SDH using LAPS	
Y.1323 (2001) Amend.1/X.86	04-2002	Using Ethernet flow control as rate limiting	
Y.1323/X.86	02-2001	Ethernet over 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	
Y.1324/X.87	10-2003	Multiple services ring based on RPR	Pre-published.
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 *This Recommendation is published with the double number E.166 and X.122*	
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.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	

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 *A Corrigendum was indicated in 06/1990 for the English version.*	
X.142	10-2003	Quality of service metrics for characterizing Frame Relay /ATM service interworking performance	Pre-published.
X.144	10-2003	User information transfer performance parameters for public frame relay data networks	Pre-published.
X.145	10-2003	Connection establishment and dis-engagement performance parameters for public frame relay data networks providing SVC services	Pre-published.
X.146	10-2000	Performance objectives and quality of service classes applicable to frame relay	
X.147	10-2003	Frame Relay network availability	Pre-published.
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	Pre-published.
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	Pre-published.
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.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	
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) 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	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCE's	
X.217*bis*	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 *This title results from the modification of ITU-T X.222 (04/95) former title by Amendment 1 (10/96).*	
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	
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	Nested connections functional unit	
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	Managed objects for diagnostic information of public switched telephone network connected V-series modem DCE's	
X.227*bis*	09-1998	Information technology - Open Systems Interconnection - Connection-mode	

X.228	11-1988	Reliable Transfer: Protocol specification	
X.228 (1988) Corrigendum 1	03-2000	Corrigendum 1	
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	
X.236	04-1995	Information technology - Open Systems Interconnection - Connectionless Presentation protocol: Protocol specification	
X.236 (1995) Amendment 1	06-1999	Efficency enhancements	
X.237	04-1995	Information technology - Open Systems Interconnection - Connectionless protocol for the Association Control Service Element: Protocol specification	
X.237 (1995) Amendment 1	10-1996	Incorporation of extensibility markers and authentication parameters	
X.237 Amd1 (10/96) Technical Cor.1	06-1999		
X.237*bis*	09-1998	Information technology - Open Systems Interconnection - Connectionless protocol for the Application Service Object Association Control Service Element	
X.245	04-1995	Information technology - Open Systems Interconnection - Connection-oriented Session protocol: Protocol Implementation Conformance Statement (PICS) proforma	
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	
X.248	11-1995	Information technology - Open Systems Interconnection - Reliable Transfer: Protocol Implementation Conformance Statement (PICS) proforma	
X.249	11-1995	Information technology - Open Systems Interconnection - Remote Operations: Protocol Implementation Conformance Statement (PICS) proforma	
X.255	04-1995	Information technology - Open Systems Interconnection - Connectionless Session protocol: Protocol Implementation Conformance Statement (PICS) proforma	
X.256	04-1995	Information technology - Open Systems Interconnection - Connectionless Presentation protocol: Protocol Implementation Conformance Statement (PICS) proforma	
X.257	04-1995	Information technology - Open Systems Interconnection - Connectionless protocol for the Association Control Service Element: Protocol Implementation Conformance Statement (PICS) proforma	
X.257 (1995) Amendment 1	10-1996	Support of authentication parameters	
X.260	10-1996	Information technology - Framework for protocol identification and encapsulation	
X.263	09-1998	Information technology - Protocol identification in the Network Layer	
X.264	11-1993	Transport protocol identification mechanism	
X.272	03-2000	Data compression and privacy over frame relay networks	

X.274	07-1994	Information technology - Telecommunication and information exchange between systems - Transport layer security protocol	
X.281	06-1999	Information technology - Elements of management information related to the OSI Physical Layer	
X.282	06-1999	Elements of management information related to the OSI Data Link layer	
X.283	12-1997	Information technology - Elements of management information related to the OSI Network layer	
X.284	12-1997	Information technology - Elements of management information related to the OSI Transport Layer	
X.287	03-1999	Information technology - Open Systems Interconnection - Structure of management information: Managed objects for supporting upper layers	
X.290	04-1995	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - General concepts	
X.291	04-1995	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Abstract test suite specification	
X.292	05-2002	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - The Tree And Tabular Combined Notation (TTCN)	
X.293	04-1995	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Test realization	
X.294	04-1995	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Requirements on test laboratories and clients for the conformance assessment process	
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X.296	11-1995	OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Implementation conformance statements	
X.300	10-1996	General principles for interworking between public networks and between public networks and other networks for the provision of data transmission services	
X.301	10-1996	Description of the general arrangements for call control within a subnetwork and between subnetworks for the provision of data transmission services	
X.302	11-1988	Description of the general arrangements for internal network utilities within a subnetwork and intermediate utilities between subnetworks for the provision of data transmission services	
X.305	11-1988	Functionalities of subnetworks relating to the support of the OSI connection-mode network service	
X.320	10-1996	General arrangements for interworking between integrated services digital networks (ISDNs) for the provision of data transmission services	
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 *This Recommendation is also included but not published in I series under alias number I.540*	
X.322	11-1988	General arrangements for interworking between Packet-Switched Public Data Networks (PSPDNs) and Circuit-Switched Public Data Networks (CSPDNs) for the provision of data transmission services	
X.323	11-1988	General arrangements for interworking between Packet-Switched Public Data Networks (PSPDNs)	
X.324	11-1988	General arrangements for interworking between Packet-Switched Public Data Networks (PSPDNs) and public mobile systems 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 *This Recommendation is also included but not published in I series under alias number I.550*	
X.326	11-1988	General arrangements for interworking between Packet-Switched Public Data	

X.327	11-1993	General arrangements for interworking between Packet-Switched Public Data Networks (PSPDNs) and private data networks for the provision of data transmission services	
X.328	10-1996	General arrangements for interworking between Public Data Networks providing frame relay data transmission services and Integrated Services Digital Networks (ISDNs) for the provision of data transmission services	
X.329	03-2000	General arrangements for interworking between networks providing frame relay data transmission services and B-ISDN	
X.340	03-1993	General arrangements for interworking between a Packet-Switched Public Data Network (PSPDN) and the international telex network	
X.350	12-1997	General interworking requirements to be met for data transmission in international public mobile satellite systems	
X.351	11-1988	Special requirements to be met for Packet Assembly/Disassembly facilities (PADs) located at or in association with coast earth stations in the public mobile satellite service	
X.352	11-1988	Interworking between packet-switched public data networks and public maritime mobile satellite data transmission systems	
X.353	11-1988	Routing principles for interconnecting public maritime mobile satellite data transmission systems with public data networks	
X.361	10-1996	Connection of VSAT systems with Packet-Switched Public Data Networks based on X.25 procedures	
Y.1402/X.371	02-2001	General arrangements for interworking between Public Data Networks and the Internet	
X.371/Y.1402	02-2001	General arrangements for interworking between Public Data Networks and the Internet	
F.400/X.400	06-1999	Message handling services: Message handling system and service overview	Pre-published.
X.402	06-1999	Information technology - Message Handling Systems (MHS) - Overall Architecture	
X.404	06-1999	Information technology - Message Handling Systems (MHS): MHS routing - Guide for messaging systems managers	
X.408	11-1988	Message handling systems: Encoded information type conversion rules	
X.411	06-1999	Information technology - Message Handling Systems (MHS): Message transfer system: abstract service definition and procedures	
X.412	06-1999	Information technology - Message Handling System (MHS): MHS routing	
X.413	06-1999	Information technology - Message Handling Systems (MHS) - Message store: Abstract Service Definition	
X.419	06-1999	Information technology - Message Handling Systems (MHS): Protocol specifications	
X.420	06-1999	Information technology - Message Handling Systems (MHS): Interpersonal messaging system	
X.421	06-1999	Message Handling Systems: COMFAX use of MHS	
X.435	06-1999	Information technology - Message handling services (MHS): Electronic Data Interchange messaging system	
X.440	06-1999	Message handling systems: Voice messaging system	Pre-published.
X.445	04-1995	Asynchronous protocol specification - Provision of OSI connection mode network service over the telephone network	
X.446	08-1997	Common messaging call API	
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