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ISO/IEC JTC 1/SGFS

SPECIAL GROUP ON FUNCTIONAL STANDARDIZATION

Secretariat: Netherlands (NNI)

TITLE: STATUS REPORT ON CCITT STUDY GROUP VII ACTIVITIES

SOURCE: CCITT STUDY GROUP VII LIAISON OFFICER TO ISO/IEC JTC 1/SGFS (H. Bertine)

CONTENTS:

1. INTRODUCTION

CCITT Study Group VII very much appreciates the spirit of cooperation that has prevaled in the areas of overlapping interest between JTC 1/SGFS and Study Group VII. As a result, duplicate efforts yielding different results have been replaced with cooperative efforts resulting in ISPs meeting the needs of both organizations.

During the 1989-92 study period, Study Group VII was assigned 33 Questions for its program of work (see Annex A). Of particular interest to the SGFS is Question 23/VII which includes, as a study point, work on "profiles and classification schemes, with particular attention to the work of ISO/IEC JTC 1 on functional standardization." In addition, many other Questions deal with standardization of protocols that are being specified in ISPs.

Study Group VII met 6-16 April 1992 for its final meeting of the 1989-92 study period. The main activities at this meeting were to:

a) complete work on a large number of Recommendations and submit them for approval;

b) identify important work that needs to continue during the interregnum period and appoint Special Rapporteurs to carry out this work;

c) identify draft Recommendations that are expected to be ready for approval by the first meeting of Study Group VII in the 1993-96 study period (June 1993);

d) prepare draft Questions for the program of work for the 1993-96 study period; and

e) prepare any necessary liaison statements as a result of the work.

This paper, in the following sections, covers the results of the first four activities. Conveyed separately are three liaison statements covering the following subjects:

1) comments on pDISP 11188-1 as part of the informal quality review;

2) response to liaisons on use of semi-permanent and permanent ISDN connections and application of X.32 procedures to X.31 Case B operation; and

3) comments on draft ISP 10609-20.

2. STATUS OF RECOMMENDATIONS AT THE CONCLUSION OF THE APRIL 1992 MEETING

Study Group VII endorsed 72 new or revised Recommendations for approval at its April 1992 meeting. Of these, 44 Recommendations were put forth for Resolution No. 2 approval which involves a three month ballot. The CCITT circular letter initiating the ballot is expected to be issued 10 June 1992. Another 28 Recommendations were sent to the CCITT Plenary Assembly for approval. The Plenary Assembly is scheduled to meet 1-12 March 1993.

Annex B gives a complete listing of all X-series Recommendations and their status as of the April 1992 final meeting of Study Group VII in this study period. The SGFS is requested to ensure that references are made to the applicable CCITT Recommendations in ISPs.

3. INTERREGNUM ACTIVITIES

As CCITT is moving more and more to a continuous work effort, special attention was given to identifying important work that should continue between the final meeting of each of Study Group in this study period and the first meeting of each Study Group in next study period. For Study Group VII, this is the period between 17 April 1992 and 21 June 1993.

Work during this gap continues according to the present structure of Questions and Working Parties but, in many cases, new individuals have been appointed Interregnum Special Rapporteurs. Most of these Interregnum Special Rapporteurs expect to hold meetings during the interregnum period.

In addition, to help bridge this gap, Working Parties of Study Group VII (but not Study Group VII, itself) will meet for the week 26-30 October 1992. At the present time, it is expected that all Working Parties except Working Party VII/4 (responsible for Questions 18-20/VII) will meet during this week.

4. RECOMMENDATIONS ANTICIPATED FOR APPROVAL IN JUNE 1993

A total of 55 draft new and revised Recommendations have been identified as candidates for approval at the first meeting of Study Group VII in the 1993-96 Study Period. This meeting is scheduled for 22 June - 2 July 1993. Draft text for these Recommendations, according to present rules, needs to be in the hands of the CCITT secretariat no later than early January 1993.

A complete list of these draft Recommendations is given in Annex C. The 42 draft Recommendations shown against Questions 19, 23, 24, 25 and 26/VII are being developed in cooperation with JTC 1/SC 21 and the nine draft Recommendations shown against Questions 7 and 27/VII are being developed in cooperation with JTC 1/SC 6.

5. DRAFT QUESTIONS FOR THE 1993-96 STUDY PERIOD

CCITT has a special group called Resolution 18 which is making proposals regarding organization and procedures for CCITT. These proposals will be considered at the March 1993 meeting of the CCITT Plenary Assembly. As currently proposed by this group, the general area of work for Study Group VII would remain essentially the same, with minor revisions in the title and scope as follows:

> **Study Group VII - Data Networks and Open System Communications**
>
> **Responsible for studies relating to data communication networks, and for studies relating to the development and application of Open Systems Interconnection including Networking, Message Handling, Directory, Security and Management. Has overall responsibility for technical collaborative work with ISO/IEC JTC 1.**

Based on this scope, Study Group VII has prepared 25 Questions for its program of work for the 1993-96 study period (see Annex D). Please note the new numbering for the 1993-96 study period. Also note the realignment of work among some Questions. For example, the previous Question 19/VII included work on ODP (now Question 16/VII), security (now Question 20/VII), ROSE and RTSE (now part of Question 21/VII), and ASN.1 (now part of Question 22/VII).

6. STUDY GROUP VII TENTATIVE MEETING SCHEDULE FOR THE 1993-96 STUDY PERIOD

The following are the tentative meeting dates for Study Group VII. These meetings are scheduled at approximately nine month intervals.

First meeting: 22 June - 2 July 1993
Second meeting: January or February 1994
Third meeting: October 1994
Fourth meeting: June 1995
Fifth meeting: first half of 1996

Please note the importance of these meeting dates. Under CCITT procedures, approval of Recommendations can only be undertaken at a Study Group meeting.

In order to help avoid meeting date conflicts, please convey (immediately after your 15-19 June meeting) to the CCITT secretariat the best information you have regarding SGFS meeting dates through 1995.

7. CCITT AND ISO/IEC JTC 1 COOPERATION

As mentioned in the Introduction, Study Group VII is pleased with the spirit of cooperation it has experienced with JTC 1 SC 6, SC 18, SC 21 and the SGFS. Study Group VII has also strongly supported the efforts of the Collaborative Group on Procedures for CCITT and ISO/IEC JTC 1 Cooperation. We note with satisfaction the endorsement for interim use of the revised procedures and new drafting rules by both JTC 1 and the CCITT Resolution 18 group. And we look forward to their final adoption by both organizations.

This month marks a major milestone in our collaborative effort with the publication of the first identical text (i.e., using the new common text format) Recommendation | International Standard, which is X.736 | ISO/IEC 10164-7.

There are two areas we would like to bring to your attention in order to improve our collaboration.

We understood that where "twin" CCITT Recommendations and ISO/IEC International Standards exist, that both would be referenced in ISPs. However, we have noticed numerous situations where this has not been done. We would appreciate SGFS reaffirmation of this principle and the inclusion of an explicit check point item in the Explanatory Report and in the Review Report for each draft ISP.

We also note that some liaison contributions from Study Group VII are not getting to the appropriate editors or editing meetings where their content should be taken into account. It is not practical for the CCITT secretariat to correspond other than with the SGFS secretariat. Therefore, we would very much appreciate the SGFS secretariat assuming the responsibility for timely forwarding of these contributions to the responsible individuals.

With the beginning of a new CCITT study period, we would like to take this opportunity to welcome suggestions from the SGFS on ways to improve cooperation.

(A)

LIST OF QUESTIONS ENTRUSTED TO STUDY GROUP VII FOR THE PERIOD 1989-1992

No.	Title
1/VII	Standardization of the technical characteristics of user classes of service, international data transmission services and optional user facilities in public data networks (PDNs) and ISDNs and the categories of access for DTEs to such services
2/VII	Call progress signals
3/VII	Technical characteristics of connectionless services in public networks
4/VII	Network performance and Quality of Service in Data Communications Networks
5/VII	Testing and verification of data communication protocols
6/VII	Further study on Recommendations for DTE/DCE interfaces for circuit switched service (X.20, X.20bis, X.21, X.21bis, X.22) and study on access to the CSPDN through telephone networks
7/VII	Further study of DTE/DCE interfaces for terminals operating in the packet mode
8/VII	Study of DTE/DCE interface procedures for dissimilar terminal interworking
9/VII	Principles of maintenance in user-network interfaces for public data networks
10/VII	General technical principles for interworking between public networks or between public networks and other networks for the provision of data services
11/VII	Arrangements generic to different interworking (circuit and packet modes) between public networks or between public networks and other networks, for the provision of data services
12/VII	Management aspects of interworking between public networks, and between public networks and other networks when involved in the provision of data services
13/VII	Interworking between public data networks (circuit switched and packet switched) and ISDNs and between ISDNs, for the provision of data services
14/VII	Interworking between public data networks and the telex network
15/VII	Arrangements for interworking between networks other than ISDNs and telex, for the provision of data services
16/VII	Packet mode signalling between public networks providing data transmission
17/VII	Arrangements for CSPDNs interworking and associated inter-network signalling
18/VII	Message handling systems
19/VII	Framework for support of distributed applications
20/VII	Directory systems
21/VII	Numbering plan for public data networks
22/VII	Routing principles for public data networks
23/VII	Open Systems Interconnection (OSI) Architecture
24/VII	Open Systems Interconnection (OSI) Management
25/VII	Open Systems Interconnection (OSI) Application Layer
26/VII	Open Systems Interconnection (OSI) Presentation and Session Layers
27/VII	Open Systems Interconnection (OSI) Transport and Network Layers
28/VII	Open Systems Interconnection (OSI) Data Link and Physical Layers
29/VII	Application of formal description techniques to X-Series Recommendations
30/VII	Support of X-Series interfaces in an ISDN and new interface aspects for data services in ISDNs
31/VII	Requirements and arrangements for the provision of data services in ISDNs
32/VII	Continue the preparation of definitions which arise during the study of all Questions entrusted to Study Group VII
33/VII	Revision of Recommendations

B

CCITT X-SERIES RECOMMENDATIONS

STATUS AT FINAL MEETING OF STUDY GROUP VII

Status*	Rec. No.	Title	CCITT Document
R-PA	X.1	International User Classes of Service In and Categories of Access to Public Data Networks and Integrated Services Digital Networks (ISDNs)	VII-R52
R-PA	X.2	International Data Transmission Services and Optional User Facilities in Public Data Networks and ISDNs	VII-R52
R-PA	X.3	Packet Assembly Disassembly Facility (PAD) in a Public Data Network	VII-R54
U	X.4	General Structure of Signals of International Alphabet No. 5 Code for Character Oriented Data Transmission Over Public Data Networks	Blue Book
U	X.5	Facsimile Packet Assembly/Disassembly Facility (FPAD) in a Public Data Network	VII-R35 to be published
N-PA	X.6	Multicast Service Definition	VII-R52
N-PA	X.7	Technical Characteristics of Data Transmission Services	VII-R52
R-PA	X.10	Categories of Access for Data Terminal Equipment (DTE) to Public Data Transmission Services	VII-R52
U	X.20	Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Start-Stop Transmission Services on Public Data Networks	Blue Book
U	X.20bis	Use on Public Data Networks of Data Terminal Equipment (DTE) which is Designed for Interfacing to Asynchronous Duplex V-Series Modems	Blue Book
R-R2	X.21	Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Synchronous Operation on Public Data Networks	VII-R39 + Blue Book
U	X.21bis	Use on Public data Networks of Data Terminal Equipment (DTE) which is Designed for Interfacing to Synchronous V.-Series Modems	Blue Book
U	X.22	Multiplex DTE/DCE Interface for User Classes 3-6	Blue Book
U	X.24	List of Definitions for Interchange Circuits Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) on Public Data Networks	Blue Book

Status*	Rec. No.	Title	CCITT Document
R-PA	X.25	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	VII-R53
See SG XVII	X.26	Electrical Characteristics for Unbalanced Double-Current Interchange Circuits for General Use with Integrated Circuit Equipment in the Field of Data Communications	
See SG XVII	X.27	Electrical Characteristics for Balanced Double-Current Interchange Circuits for General Use with Integrated Circuit Equipment in the Field of Data C Communications	
R-PA	X.28	DTE/DCE Interface for a Start-Stop Mode Data Terminal Equipment Accessing the Packet Assembly/Disassembly Facility (PAD) in a Public Date Network Situated in the Same Country	VII-R54
R-PA	X.29	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	VII-R54
R-PA	X.30	Support of X.21, X.21bis and X.20bis Based Data Terminal Equipments (DTEs) by an Integrated Services Digital Network (ISDN)	VII-R56
R-PA	X.31	Support of Packet Mode Terminal Equipment by an ISDN	VII-R56
R-PA	X.32	Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Terminals Operating in the Packet Mode and Accessing a Packet Switched Public Data Network Through a Public Switched Telephone Network or an Integrated Services Digital Network or a Circuit Switched Public Data Network	VII-R53
U	X.38	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	VII-R35 to be published
U	X.39	Procedures for the Exchange of Control Information and User Data Between a Facsimile Packet Assembly/Disassembly (FPAD) Facility and a Packet Mode DTE or Another FPAD	VII-R35 to be published
See SG IX	X.40	Standardization of Frequency-Shift Modulated Transmission Systems for the Provision of Telegraph and Data Channels by Frequency Division of a Group	
See SG IX	X.50	Fundamental Parameters of a Multiplexing Scheme for the International Interface Between Synchronous Data Networks	

Status*	Rec. No.	Title	CCITT Document
See SG IX	X.50bis	Fundamental Parameters of a 48-kbit/s User Data Signalling Rate Transmission Scheme for the International Interface Between Synchronous Data Networks	
See SG IX	X.51	Fundamental Parameters of a Multiplexing Scheme for the International Interface Between Synchronous Data Networks Using 10-bit Envelope Structure	
See SG IX	X.51bis	Fundamental Parameters of a 48-kbit/s User Signalling Rate Transmission Scheme for the International Interface Between Synchronous Data Networks Using 10-bit Envelope Structure	
See SG IX	X.52	Method of Encoding Anisochronous Signals into a Synchronous User Bearer	
See SG IX	X.53	Numbering of Channels on International Multiplex Links at 64 kbit/s	
See SG IX	X.54	Allocation of Channels on International Multiplex Links at 64 kbit/s	
See SG IX	X.55	Interface Between Synchronous Data Networks Using a 6 + 2 Envelope Structure and Single Channel Per Carrier (SCPC) Satellite Channels	
See SG IX	X.56	Interface Between Synchronous Data Networks Using an 8 + 2 Envelope Structure and Single Channel Per Carrier (SCPC) Satellite Channels	
See SG IX	X.57	Method of Transmitting a Single Lower Speed Data Channel on a 64 kbit/s Data Stream	
See SG IX	X.58	Fundamental Parameters of a Multiplexing Scheme for the International Interface Between Synchronous Non-Switched Data Networks Using No Envelope Structure	
U	X.60	Common Channel Signalling for Circuit Switched Data Applications	Blue Book
U	X.61	Signalling System No. 7 - Data User Part	Blue Book
U	X.70	Terminal and Transit Control Signalling System for Start-Stop Services on International Circuits Between Anisochronous Data Networks	Blue Book
U	X.71	Decentralized Terminal and Transit Control Signalling System on International Circuits Between Synchronous Data Networks	Blue Book

Status*	Rec. No.	Title	CCITT Document
R-PA	X.75	Packet-Switched Signalling System Between Public Networks Providing Data Transmission Services	VII-R55
U	X.80	Interworking of Interexchange Signalling Systems for Circuit Switched Data Services	Blue Book
U	X.81	Interworking Between an ISDN Circuit-Switched and a Circuit-Switched Public Data Network (CSPDN)	Blue Book
U	X.82	Detailed Arrangements for Interworking Between CSPDNs and PSPDNs Based on Recommendation T.70	Blue Book
U	X.92	Hypothetical Reference Connections for Public Synchronous Data Networks	Blue Book
R-PA	X.96	Call Progress Signals in Public Data Networks	VII-R52
U	X.110	International Routing Principles and Routing Plan for Public Data Networks	Blue Book
R-R2	X.121	International Numbering Plan for Public Data Works	VII-R45
R-R2	X.122/ E.166	Numbering Plan Interworking for the E.164 and X.121 Numbering Plans	VII-R45
U	X.130	Call Processing Delays in Public Data Networks when Providing International Synchronous Circuit-Switched Data Services	Blue Book
U	X.131	Call Blocking in Public Data Networks when Providing International Synchronous Circuit-Switched Data Services	Blue Book
R-R2	X.134	Portion Boundaries and Packet Layer Reference Events: Basis for Defining Packet-Switched Performance Parameters	VII-R39 + Blue Book
R-R2	X.135	Speed of Service (Delay and Throughput) Performance Values for Public Data Networks when Providing International Packet-Switched Services	VII-R39 + Blue Book
R-R2	X.136	Accuracy and Dependability Performance Values for Public Data Networks when Providing International Packet-Switched Services	VII-R39 + Blue Book
R-R2	X.137	Availability Performance Values for Public Data Networks When Providing International Packet-Switched Services	VII-R39 + Blue Book
N-R2	X.138	Measurement of Performance Values for Public Data Networks When Providing International Packet-Switched Services	VII-R39
N-R2	X.139	Echo, Drop, Generator and Test DTE's for Measurement of Performance Values in Public Data Networks When providing International Packet-Switched Services	VII-R39

Status*	Rec. No.	Title	CCITT Document
R-R2	X.140	General Quality of Service Parameters for Communication Via Public Data Networks	VII-R39 + Blue Book
U	X.141	General Principles for the Detection and Correction of Errors in Public Data Networks	Blue Book
U	X.150	Principles of Maintenance Testing for Public Data Networks Using Data Terminal Equipment (DTE) and Data Circuit-Terminating (DCE) Test Loops	Blue Book
U	X.180	Administrative Arrangements for International Closed User Groups (CUGs)	Blue Book
U	X.181	Administrative Arrangements for the Provision of International Permanent Virtual Circuits (PVCs)	Blue Book
U	X.200	Reference Model of Open Systems Interconnection for CCITT Applications	Blue Book
U	X.208	Specification of Abstract Syntax Notation One (ASN.1)	Blue Book
U	X.209	Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)	Blue Book
U	X.210	Open Systems Interconnection Layer Service Definition Conventions	Blue Book
U	X.211	Physical Service Definition of Open Systems Interconnection for CCITT Applications	Blue Book
U	X.212	Data Link Service Definition for Open Systems Interconnection for CCITT Applications	Blue Book
R-R2	X.213	Information technology - Open Systems Interconnection - Network Service Definition	VII-R48
U	X.214	Transport Service Definition for Open Systems Interconnection for CCITT Applications	Blue Book
U	X.215	Session Service Definition for Open Systems Interconnection for CCITT Applications	Blue Book
U	X.216	Presentation Service Definition for Open Systems Interconnection for CCITT Applications	Blue Book
R-R2	X.217	Information technology - Open Systems Interconnection - Service Definition for the Association Control Service Element	VII-R46

Status*	Rec. No.	Title	CCITT Document
R-PA	X.218	Reliable Transfer: Model and Service Definition	VII-R57 + Blue Book
U	X.219	Remote Operations: Model, Notation and Service Definition	Blue Book
R-PA	X.220	Use of X.200-Series Protocols in CCITT Applications	VII-R57
U	X.223	Use of X.25 to Provide the OSI Connection-Mode Network Service for CCITT Applications	Blue Book
U	X.224	Transport Protocol Specification for Open Systems Interconnection for CCITT Applications	Blue Book
U	X.225	Session Protocol Specification for Open Systems Interconnection for CCITT Applications	Blue Book
U	X.226	Presentation Protocol Specification for Open Systems Interconnection for CCITT Applications	Blue Book
R-R2	X.227	Information technology - Open Systems Interconnection - Protocol Specification for the Association Control Service Element	VII-R46
U	X.228	Reliable Transfer: Protocol Specification	Blue Book
U	X.229	Remote Operations: Protocol Specification	Blue Book
N-R2	X.237	Information technology - Open Systems Interconnection - Connectionless Protocol Specification for the Association Control Service Element	VII-R46
U	X.244	Procedure for the Exchange of Protocol Identification During Virtual Call Establishment on Packet Switched Public Data Networks	Blue Book
N-R2	X.248	Reliable Transfer Service Element - Protocol Implementation Conformance Statement (PICS) Proforma	VII-R44
N-R2	X.249	Remote Operations Service Element - Protocol Implementation Conformance Statement (PICS) Proforma	VII-R44
U	X.290	OSI Conformance Testing Methodology and Framework for Protocol Recommendations for CCITT Applications - General Concepts	VII-R26 to be published
U	X.291	OSI Conformance Testing Methodology and Framework for Protocol Recommendations for CCITT Applications - Abstract Test Suite Specification	VII-R26 to be published
N-R2	X.292	OSI Conformance Testing Methodology and Framework for Protocol Recommendations for CCITT Applications - The Tree and Tabular Combined Notation (TTCN)	VII-R40

Status*	Rec. No.	Title	CCITT Document
U	X.293	OSI Conformance Testing Methodology and Framework for Protocol Recommendations for CCITT Applications - Test Realization	VII-R26 to be published
U	X.294	OSI Conformance Testing Methodology and Framework for Protocol Recommendations for CCITT Applications - Requirements on Test Laboratories and Clients for Conformance Assessment Process	VII-R26 to be published
U	X.300	General Principles for Interworking Between Public Networks, and Between Public Networks and Other Networks for the Provision of Data Transmission Services	Blue Book
R-PA	X.301	Description of the General Arrangements for Call Control Within a Subnetwork and Between Subnetworks for the Provision of Data Transmission Services	VII-R55
U	X.302	Description of the General Arrangements for Internal Network Utilities within a Subnetwork and Intermediate Utilities Between Subnetworks for the Provision of Data Transmission Services	Blue Book
U	X.305	Functionalities of Subnetworks Relating to the Support of the OSI Connection-Mode Network Service	Blue Book
U	X.320	General Arrangements for Interworking Between Integrated Services Digital Networks (ISDNs) for the Provision of Data Transmission Services	Blue Book
U	X.321	General Arrangements for Interworking Between Circuit Switched Public Data Networks (CSPDNs) and Integrated Service Digital Networks (ISDNs) for the Provision of Data Transmission Services	Blue Book
U	X.322	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	Blue Book
U	X.323	General Arrangements for Interworking Between Packet Switched Public Data Networks (PSPDNs)	Blue Book
U	X.324	General Arrangements for Interworking Between Packet Switched Public Data Networks (PSPDNs) and Public Mobile Systems for the Provision of Data Transmission Services	Blue Book

Status*	Rec. No.	Title	CCITT Document
U	X.325	General Arrangements for Interworking Between Packet Switched Public Data Networks (PSPDNs) and Integrated Services Digital Networks (ISDNs) for the Provision of Data Transmission Services	Blue Book
U	X.326	General Arrangements for Interworking Between Packet Switched Public Data Networks (PSPDNs) and Common Channel Signalling Network (CCSN)	Blue Book
U	X.327	General Arrangements for Interworking Between Packet Switched Public Data Networks (PSPDNs) and Private Data Networks for the Provision of Data Transmission Services	Blue Book
N-PA	X.340	General Arrangements for Interworking Between a Packet Switched Public Data Network (PSPDN) and the International Telex Network	VII-R55
U	X.350	General Interworking Requirements to be met for Data Transmission in International Public Mobile Satellite Systems	Blue Book
U	X.351	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	Blue Book
U	X.352	Interworking Between Packet Switched Public Data Networks and Public Maritime Mobile Satellite Data Transmission Systems	Blue Book
U	X.353	Routing Principles for Interconnecting Public Maritime Mobile Satellite Data Transmission Systems with Public Data Networks	Blue Book
U	X.370	Arrangements for the Transfer of Internetwork Management Information	Blue Book
See SG I	X.400/ F.400	Message Handling System and Service Overview	VII-R57 (Foreword)
R-R2	X.402	Message Handling Systems: Overall Architecture	VII-R41
U	X.403	Message Handling Systems: Conformance Testing	Blue Book
U	X.407	Message Handling Systems: Abstract Service Definition Conventions	Blue Book
See SG VIII	X.408	Message Handling Systems: Encoded Information Type Conversion Rules	
R-R2	X.411	Message Handling Systems: Message Transfer System: Abstract Service Definition and Procedures	VII-R41

Status*	Rec. No.	Title	CCITT Document
R-R2	X.413	Message Handling Systems: Message Store: Abstract-Service Definition	VII-R42
R-R2	X.419	Message Handling Systems: Protocol Specifications	VII-R42
R-R2	X.420	Message Handling Systems: Interpersonal Messaging System	VII-R42
U	X.435	Message Handling Systems: EDI Messaging System	Pamphlet
N-R2	X.440	Message Handling Systems: Voice Messaging System	VII-R43
N-R2	X.480	Message Handling Systems and Directory Services Conformance Testing	VII-R44
N-R2	X.481	P2 Protocol: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R49
N-R2	X.482	P1 Protocol: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R49
N-R2	X.483	P3 Protocol: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R49
N-R2	X.484	P7 Protocol: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R49
N-R2	X.485	Message Handling Systems: Voice Messaging System: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R43
R-PA	X.500	Information technology - Open Systems Interconnection - The Directory: Overview of Concepts, Models, and Services	VII-R50
R-PA	X.501	Information technology - Open Systems Interconnection - The Directory: Models	VII-R50
R-PA	X.509	Information technology - Open Systems Interconnection - The Directory: Authentication Framework	VII-R50
R-PA	X.511	Information technology - Open Systems Interconnection - The Directory: Abstract Service Definition	VII-R50
R-PA	X.518	Information technology - Open Systems Interconnection - The Directory: Procedures for Distributed Operation	VII-R51
R-PA	X.519	Information technology - Open Systems Interconnection - The Directory: Protocol Specifications	VII-R51
R-PA	X.520	Information technology - Open Systems Interconnection - The Directory: Selected Attribute Types	VII-R51
R-PA	X.521	Information technology - Open Systems Interconnection - The Directory: Selected Object Classes	VII-R51
R-PA	X.525	Information technology - Open Systems Interconnection - The Directory: Replication	VII-R51

Status*	Rec. No.	Title	CCITT Document
N-R2	X.581	Directory Access Protocol: Protocol Implementation Conformance Statement (PICS)	VII-R44
N-R2	X.582	Directory System Protocol: Protocol Implementation Conformance Statement (PICS)	VII-R44
N-R2	X.610	Provision and Support of the OSI Connection-Mode Network Service	VII-R48
R-R2	X.612	Information technology - Provision of the OSI Connection-Mode Network Service by Packet-Mode Terminal Equipment Connected to an Integrated Services Digital Network (ISDN)	VII-R48
N-R2	X.613	Information technology - Use of X.25 Packet Layer Protocol in Conjunction with X.21/X.21 bis to Provide the OSI Connection-Mode Network Service	VII-R48
N-R2	X.614	Information technology - Use of X.25 Packet Layer Protocol to Provide the OSI Connection-Mode Network Service Over the Telephone Network	VII-R48
U	X.650	Open Systems Interconnection (OSI) - Reference Model for Naming and Addressing	VII-R27 to be published
N-R2	X.660	Information technology - Open Systems Interconnection - Procedures for the Operation of OSI Registration Authorities - General Procedures	VII-R45
N-R2	X.665	Information technology - Open Systems Interconnection - Procedures for the Operation of OSI Registration Authorities: Application Processes and Application Entities	VII-R46
N-R2	X.700	Management Framework for Open Systems Interconnection (OSI) for CCITT Applications	VII-R45
U	X.701	Information technology - Open Systems Interconnection - Systems Management Overview	VII-R27 to be published
U	X.710	Common Management Information Service Definition for CCITT Applications	Pamphlet
U	X.711	Common Management Information Protocol Specification for CCITT Applications	Pamphlet
N-R2	X.712	Information technology - Open Systems Interconnection - Common Management Information Protocol: Protocol Implementation Conformance Statement (PICS) Proforma	VII-R45
U	X.720	Information technology - Open Systems Interconnection - Structure of Management Information: Management Information Model	VII-R27 to be published

Status*	Rec. No.	Title	CCITT Document
U	X.721	Information technology - Open Systems Interconnection - Structure of Management Information: Definition of Management Information	VII-R36 to be published
U	X.722	Information technology - Open Systems Interconnection - Structure of Management Information: Guidelines for the Definition of Managed Objects	VII-R27 to be published
U	X.730	Information technology - Open Systems Interconnection - Systems Management: Object Management Function	VII-R27 to be published
U	X.731	Information technology - Open Systems Interconnection - Systems Management: State Management Function	VII-R27 to be published
U	X.732	Information technology - Open Systems Interconnection - Systems Management: Attributes for Representing Relationships	VII-R27 to be published
U	X.733	Information technology - Open Systems Interconnection- Systems Management: Alarm Reporting Function	VII-R36 to be published
N-R2	X.734	Information technology - Open Systems Interconnection - Systems Management: Event Report Management Function	VII-R45
N-R2	X.735	Information technology - Open Systems Interconnection - Systems Management: Log Control Function	VII-R45
U	X.736	Information technology - Open Systems Interconnection - Systems Management: Security Alarm Report Function	VII-R27 to be published
N-R2	X.740	Information technology - Open Systems Interconnection - Systems Management: Security Audit Trail Function	VII-R45
U	X.800	Security Architecture for Open Systems Interconnection for CCITT Applications	Pamphlet
N-R2	X.860	Distributed Transaction Processing: Model	VII-R47
N-R2	X.861	Distributed Transaction Processing: Service Definition	VII-R47
N-PA	X.862	Distributed Transaction Processing: Protocol Specification	VII-R58 + VII-R59

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N-R2 New Recommendation for approval by Resolution 2

N-PA New Recommendation for approval by Plenary Assembly

R-R2 Revised Recommendation for approval by Resolution 2

R-PA Revised Recommendation for approval by Plenary Assembly

U Recommendation previously approved and remains unchanged

DRAFT RECOMMENDATIONS IDENTIFIED AS CANDIDATES FOR APPROVAL IN JUNE 1993

QUESTION	RECOMMENDATION	SUBJECT
Q7	Rev X.223	*Use of X.25 to support OSI CONS*
Q9	New X.cnma	Customer network architecture management
	New X.cnms	Customer network management services
Q15	New X.pvt	Interface between PSPDN and private PSDN
	Rev X.327	Private data networks - PSPDN interworking
Q19	New X.authfw	Authentication framework
	New X.ulsm	Upper layer security model
	Rev X.208	ASN.1 basic notation
	New X.ans2	ASN.1 information object specification
	New X.asn3	ASN.1 constraints specification
	New X.asn4	ASN.1 parameterization
	New X.asn5	ASN.1 character sets
	New X.209	ASN.1 basic encoding rules
	New X.aer2	ASN.1 packed encoding rules
	New X.aer3	ASN.1 distinguished encoding
Q23	Rev X.200	OSI reference model
	Rev X.210	OSI service conventions
Q24	New X.723	Generic management information
	New X.724	Guidelines for management information conformance statements
	New X.738	Summarization function
	New X.739	Work load monitoring function
	New X.742	Accounting metering function
	New X.745	Test management function
	New X.770	MOCS and MICS for X.730
	New X.771	MOCS and MICS for X.731
	New X.772	MOCS and MICS for X.732
	New X.773	MOCS and MICS for X.733
	New X.774	MOCS and MICS for X.734
	New X.775	MOCS and MICS for X.735
	New X.776	MOCS and MICS for X.736
	New X.780	MOCS and MICS for X.740
Q25	New X.207	Application layer structure
	New X.247	OSI ACSE protocol PICS proforma
	New X.851	CCR service
	New X.852	CCR protocol
	New X.853	CCR protocol PICS proforma
	New X.863	TP protocol PICS proforma
Q26	Rev X.215	OSI Session service
	Rev X.216	OSI Presentation service
	Rev X.225	OSI CO Session protocol
	Rev X.226	OSI CO Presentation prtocol
	New X.235	OSI CL Session protocol
	New X.236	OSI CL Presentation protocol
	New X.245	OSI CO Session protocol PICS proforma
	New X.246	OSI CO Presentation protocol PICS proforma
	New X.255	OSI CL Session protocol PICS proforma
	New X.256	OSI CL Presentation protocol PICS proforma
Q27	Rev X.214	OSI Transport service
	Rev X.224	OSI CO Transport protocol
	New X.233	OSI CL Network protocol
	New X.234	OSI CL Transport protocol
	New X.NLSP	OSI Network layer security protocol
	New X.TLSP	OSI Transport layer security protocol
	New X.NLMO	OSI Network layer managed objects
	New X.TLMO	OSI Transport layer managed objects

QUESTIONS FOR 1993-96 PROPOSED BY STUDY GROUP VII

(D)

NEW QUESTION	TITLE	STATUS
1/VII	Standardization of the technical characteristics of international data transmission services, user classes of service, optional user facilities, and call progress signals in public data networks (PDNs) and ISDNs and the categories of access for DTEs to such services	Amalgamation of Q1/VII, Q2/VII and Q3/VII
2/VII	Network Performance and Quality of Service in Data Communication Networks	Continuation of Q4/VII
3/VII	Numbering Plan for Public Data Networks	Continuation of Q21/VII
4/VII	Routing Principles for Public Data Networks	Continuation of Q22/VII
5/VII	Multicast	New Question
6/VII	Further study of interworking cases specific to public data networks	Amalgamation of Q10/VII, Q14/VII and Q15/VII
7/VII	Further study of the DTE/DCE interfaces for packet-mode data terminal equipments	Continuation of Q7/VII
8/VII	Study of DTE/DCE interface procedures for Dissimilar Terminal Interworking	Continuation of Q8/VII
9/VII	Packet mode signalling between public networks providing data transmission service	Amalgamation of Q11/VII and Q16/VII
10/VII	Requirements, arrangements and interface characteristics for the provision of data services, in PSDNs when accessed via the ISDNs, and in ISDNs	Amalgamation of Q13/VII, Q30/VII and Q31/VII
11/VII	Principles of management for public data networks and for the Customer Network Management Service.	Continuation of Q9/VII
12/VII	Management aspects of interworking between public data networks and between public data networks and other networks.	Continuation of Q12/VII
13/VII	Open Systems Interconnection (OSI) Systems Management	Continuation of Q24/VII
14/VII	Message Handling Systems (MHS)	Continuation of Part of Q18/VII
15/VII	Directory Systems	Continuation of Part of Q20/VII
16/VII	Reference Model and Components for Open Distributed Processing	Continuation of Part of Q19/VII
17/VII	Testing of Data Communications Protocols	Continuation of Q5/VII
18/VII	X.400/X.500 Conformance Testing	Amalgamation of Parts of Q18/VII, Q19/VII and Q20/VII
19/VII	Open Systems Interconnection (OSI) Architecture	Continuation of Q23/VII
20/VII	Security services, mechanisms and protocols for CCITT applications	Continuation of Part of Q19/VII
21/VII	Open Systems Interconnection (OSI) Application Layer	Amalgamation of Q25/VII and Part of Q19/VII
22/VII	Open Systems Interconnection (OSI) Presentation and Session Layers	Amalgamation of Q26/VII and Part of Q19/VII
23/VII	Open Systems Interconnection (OSI) Transport and Network Layers	Continuation of Q27/VII
24/VII	Open Systems Interconnection (OSI) Data Link and Physical Layers	Continuation of Q28/VII
25/VII	Revision of Recommendations	Continuation of Q33/VII (see note)

Note: Q6/VII, Q17/VII, Q29/VII and Q32/VII discontinued; any further work on Recommendations previously assigned to these Questions will be done under continuation of Q33/VII.