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INTERNATIONAL TELECOMMUNICATION UNION

CCITT

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

YELLOW BOOK

VOLUME I

MINUTES AND REPORTS
OF THE PLENARY ASSEMBLY
OPINIONS AND RESOLUTIONS
RECOMMENDATIONS ON

THE ORGANIZATION AND WORKING PROCEDURES
OF THE CCITT (SERIES A)
MEANS OF EXPRESSION (SERIES B)
GENERAL TELECOMMUNICATION STATISTICS (SERIES C)

LIST OF STUDY GROUPS
AND QUESTIONS UNDER STUDY



VIITH PLENARY ASSEMBLY
GENEVA, 10-21 NOVEMBER 1980

Geneva 1981



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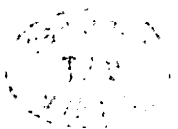


VIITH PLENARY ASSEMBLY
GENEVA, 10-21 NOVEMBER 1980

Geneva 1981

ISBN 92-61-00911-5





CONTENTS OF THE CCITT BOOK
APPLICABLE AFTER THE SEVENTH PLENARY ASSEMBLY (1980)

YELLOW BOOK

- Volume I**
- Minutes and reports of the Plenary Assembly.
 - Opinions and Resolutions.
 - Recommendations on:
 - the organization and working procedures of the CCITT (Series A);
 - means of expression (Series B);
 - general telecommunication statistics (Series C).
 - List of Study Groups and Questions under study.

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- FASCICLE II.1 – General tariff principles – Charging and accounting in international telecommunications services. Serie D Recommendations (Study Group III).
- FASCICLE II.2 – International telephone service – Operation. Recommendation E.100 - E.323 (Study Group II).
- FASCICLE II.3 – International telephone service – Network management – Traffic engineering. Recommendations E.401 - E.543 (Study Group II).
- FASCICLE II.4 – Telegraph and “telematic services”¹⁾ operations and tariffs. Series F Recommendations (Study Group I).

Volume III

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- FASCICLE III.2 – International analogue carrier systems. Transmission media – characteristics. Recommendations G.211 - G.651 (Study Group XV, CMBD).
- FASCICLE III.3 – Digital networks – transmission systems and multiplexing equipments. Recommendations G.701 - G.941 (Study Group XVIII).
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- FASCICLE IV.3 – Maintenance; international sound programme and television transmission circuits. Series N Recommendations (Study Group IV).
- FASCICLE IV.4 – Specifications of measuring equipment. Series O Recommendations (Study Group IV).

¹⁾ “Telematic services” is used provisionally.

Volume V – Telephone transmission quality. Series P Recommendations (Study Group XII).

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¹⁾ “Telematic services” is used provisionally.

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PART I

ORGANIZATION AND WORK OF THE VIIth PLENARY ASSEMBLY

1 – ORGANIZATION OF THE VIIth PLENARY ASSEMBLY OF THE CCITT

1.1 The VIIth Plenary Assembly of the International Telegraph and Telephone Consultative Committee met in Geneva (Switzerland) from Monday 10 November to Friday 21 November 1980. The meetings were held at the Geneva International Conference Centre.

84 countries Members of the ITU, represented by 84 Administrations and 27 recognized private operating agencies, took part in the proceedings. 19 international organizations sent observers. A total of 493 delegates and observers attended the meetings.

1.2 Chairman and Vice-Chairmen of the Assembly

Chairman: Mr. D. Gagliardi (Italy)

Vice-Chairmen: Mr. P. R. Hermano Balduino (Brazil)
Mr. Yang Tai Fang (China)
Mr. R. Howarth (United States)
Mr. P. Okundi (Kenya)
Mr. P. N. Voronine (U.S.S.R.)

Mr. L. Burtz, Director of the CCITT, will act as Secretary of the Assembly, assisted by Mr. M. Malek Asghar, CCITT Counsellor.

1.3 Committees of the Plenary Assembly

Committee A – Organization of Study Groups and working methods

Chairman: Mr. A. R. Bastikar (Canada)

Vice-Chairmen: Mr. T. Irmer (F. R. of Germany)
Mr. W. G. Simpson (United Kingdom)

Secretary: Mr. I. Savitsky, Senior Counsellor of the CCITT

Committee B – Work Programme of Study Groups

Chairman: Mr. M. Thué (France)

Vice-Chairmen: Mr. M. Kato (Japan)
Mr. M. Mbaye (Senegal)

Secretary: Mr. E. Hummel, Senior Counsellor of the CCITT

Committee C – Budget control

Chairman: Mr. L. Katona Kis (Hungary)

Vice-Chairmen: Mr. M. Radzi (Malaysia)
Mr. F. Al-Majid (Kuwait)

Secretary: Mr. R. Prélaz, Chief of the Finance Department of the ITU, assisted by Mr. J. Escudero, Chief of the Administrative Division of the CCITT

Committee D – CCITT Technical Assistance

Chairman: Mr. M. Ali Belhadj (Algeria)

Vice-Chairmen: Mr. A. Darman (Indonesia)
Mr. L. Di Benedetto (Argentina)

Secretary: Mr. R. Chapuis, Senior Counsellor of the CCITT

Editorial Committee

Mr. J. Larochette (France)

Mr. R. F. Coleman (United Kingdom)

Mr. J. A. Roldan (Spain)

Secretary: Mr. G. Turnbull, CCITT Counsellor

Committee A held three meetings, Committees B and C two each and Committee D four.

**2 - LIST OF PARTICIPANTS
TO THE VIIth PLENARY ASSEMBLY**

I. ADMINISTRATIONS AND RECOGNIZED PRIVATE OPERATING AGENCIES

ALBANIA

(Socialist People's Republic of)

C P. PANI
D P. BUSHATI
D I. GILA
D A. GIYMSHANA

ALGERIA

(Algerian Democratic and Popular Republic)

C M. ALI-BELHADJ
CA S. YOUYOU
D A. AOUDIA
D M. BELGACEM
D A. KHOUATMI
D M. MATI
D M. SALAOUATCHI

GERMANY

(Federal Republic of)

C H. L. VENHAUS
CA G. HAUSMANN
D M. BLAUROCK
D J. BOHM
D T. IRMER
D K. KERN
D K. H. ROSENBERG
D R. RÜGGERBERG
D A. SCHWALL
D J. SOCHER
D W. STAUDINGER

SAUDI ARABIA

(Kingdom of)

C A. M. NOURI
D R. AHMED
D A. R. AL-FAHAID
D H. K. ALSHANKITI

ARGENTINE REPUBLIC

C L. DI BENEDETTO
CA A. O. LOPEZ
D A. F. GARCÍA
D R. C. RAGO

AUSTRALIA

C K. W. POWER
CA D. K. COCKS
D R. A. R. BROWN
D B. J. FEENAGHTY
D H. R. FREEMAN (Miss)

AUSTRIA

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CA H. GÄRTNER
D W. KUDRNA
D W. SIMOTTA

Radio Austria AG

K. NEWALD
F. ZIMMERMANN

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D SIDDIQUE ALI MIAH

BELGIUM

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CA J. BIOT
D P. PLEHIERS

BENIN

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D N. MACHIOUDI

BYELORUSSIAN SOVIET SOCIALIST REPUBLIC

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CA S. N. CHILOVITCH

BRAZIL

(Federative Republic of)

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D M. BRAJTERMAN
D J. C. R. MELO

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D R. MAGA

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 D R. F. BRETT
 D J. LYNCH
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 D L. PROULX (Mrs)
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 D D. CRUICKSHANK
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D P. J. CASALTA

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 D K. C. ENG
 D Y. C. HOO
 D B. W. LIM
 D C.-S. LIM

SUDAN

(Democratic Republic of the)

C K. IDRIS

SWEDEN

C T. HAGSTRÖM
 CA H. ANDERSSON
 CA S. R. LETZÉN
 D L. ACKZELL
 D B. AKESSON
 D P.-O. PERSSON
 D O. WIKSTRÖM

SWITZERLAND

(Confederation of)

C G. BAGGENSTOS
 CA M. APOTHELOZ
 D K. J. BOHREN
 D R. BUCLIN
 D H. CHRISTEN
 D G. DUPUIS
 D K. FREIBURGHaus
 D W. JOST
 D W. JUCKER
 D F. A. NUESSELER
 D H. K. PFYFFER
 D A. ROMANENS
 D P. STEINER

Radio-Suisse S.A. de télégraphie et téléphonie sans fil

M. BEUSCH
 R. BONJOUR
 W. DAMKE
 P. MERMOD
 D. RACLE

TANZANIA

(United Republic of)

C F. M. MGAYA

CZECHOSLOVAK SOCIALIST REPUBLIC

C J. LOSINSKY
 CA I. PROKOPIK
 D S. SCHNEIDER

THAILAND

C S. P. SAKORN
 D P. LIMPAPHAYOM
 D S. LIMPISTHIEN
 D M. MITRSOMWANG
 D K. UDOMKIAT

TOGOLESE REPUBLIC

C D. AITHNARD
D M. BOUKARI
D K. MENSAH

TUNISIA

C H. CHEDLI
C R. CHKIR
D BACCAR MONGI
D A. BEN AMEUR
D LADJIMI AZIZ

TURKEY

C S. ALTAY
CA A.I. DÜNDAR
CA O. ÖCAL

UNION OF SOVIET SOCIALIST REPUBLICS

C P.N. VORONINE
CA S.I. NOVIKOV

D B.N. FEDOROV
D S.F. FILATOV
D A.V. GRINTSOV
D Y.K. KALINTSEV
D V.I. KIRSANOV
D K.K. NIKOLSKJ
D V.M. ORLOV
D K.G. SAENKO

VENEZUELA
(Republic of)

C L. LEANEZ LUGO
CA H. PALMA
D M. ALEGRETT (Mrs)
D M. LEON
D J. RAMIREZ COA
D J. RUDA

YUGOSLAVIA
(Socialist Federal Republic of)

C D. MILICEVIC (Mrs)
CA N. HOLCER
D V. RANKOVIC

II. INTERNATIONAL ORGANIZATIONS**International Air Transport Association (IATA)**

D. DENHARDT
G. HUMPHREYS
B. KEICHER
H. NEUSTADT
K. NILSSON

European Computer Manufacturers Association (ECMA)

J. SCHWARZ

International Telecommunications Users Group (INTUG)

W. P. BUÈCHE
M. D. CAMPBELL
B. C. CULLEN
J. K. KELLY
L. METCALF
D. POLLARD
M. SIALM
R. SPAHNI

Intergovernmental Bureau for Informatics (IBI)

O. RATEAU

International Chamber of Shipping (ICS)

M. A. CALDER

International Press Telecommunications Council (IPTC)

F. I. RAY
O. G. ROBINSON
J. G. THOMPSON
C. WATANABE

International Electrotechnical Commission (IEC)

I. DOROGANOV
L. VAN ROOY

International Conference on Large High Tension Electric Systems

A. J. PESONEN

International Organization for Standardization (ISO)

N. N. CHOPRA
L. DURAND
W. HOFMANN
E. LOHSE
J. TUCKER

International Telecommunications Satellite Organization (INTELSAT)

G. E. A. ABUTALEB
P. TROUTMAN

African Postal and Telecommunications Union (UAPT)

J. C. KOUNKOU
M. SIMPORE

Arab Telecommunication Union (ATU)

S. K. AL-ANI
M. ALWA

Panafrican Telecommunication Union (PATU)

M. B. CAMARA

International Society for Aeronautical Telecommunications

K. S. MOLENAAR
J. THOMKA-GAZDIK
R. A. VARGUES

Society for Worldwide Interbank Financial Telecommunications S.C. (SWIFT)

J. CERVEAU
C. REUTERSKIÖLD
R. ROTH

III. SPECIALIZED AGENCIES**Economic Commission for Europe (ECE)**

D. BALABANOV

United Nations Educational, Scientific and Cultural Organization (UNESCO)

H. TOPUZ

International Civil Aviation Organization (ICAO)

R. VUKOVIC

Universal Postal Union (UPU)

H. ENGELKE
H. P. PUTS
U. SCHAUER
T. SCOTT

World Meteorological Organization (WMO)

H. A. BARI
K. YAMAGUCHI
G. A. ZOUEV

IV. INTERNATIONAL TELECOMMUNICATION UNION (ITU)**General Secretariat**

M. MILI
R. BUTLER
P. BRONZINI
E. CABRAL DE MELLO
R. FONTAINE
M. IBNOU ZEKRI
A. LAOUYANE
R. MACHERET
U. PETIGNAT
R. PRELAZ
R. A. PROVENCHER
S. RAHIM
T. RAS-WORK
R. SMITH
P. TRAUB
A. ZACCAGNINI
M. KNIGHT (Miss)
P. TAILLEFER (Miss)
F. PEYSSON (Miss)
M. GRAND (Mrs)
A. LAVERRIÈRE
M. JOHNER (Mrs)

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G. BYRNE-SUTTON
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F. G. PERRIN
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J. RUTKOWSKI
A. W. BOYLE
R. FROOM
P. GUILLOT
H. SONOKI
C. STETTLER

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C. MATEO (Mrs)
R. CHAPUIS
E. HUMMEL
I. SAVITSKI
M. BETANCOURT
M. MALEK ASGHAR
T. OKABE
G. TURNBULL
R. BAILLOD
F. BIGI
Z. BOBILEWICZ
Y. BOZEC
A. CABRERA
F. CANTERO
F. COHEN
J. ESCUDERO
C. MOUSSAC
E. PIERRE
Y. SENUMA
G. RENDLE
J. TAR

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A. GANGULI
Y. WISARD (Mrs)
A. ANSELMIER (Mrs)
J. CAMPBELL (Miss)
K. FAMELIADO (Miss)
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N. LE GALL
R. LUTOLF
S. PEDRENO (Mrs)
N. SCHULI (Miss)
M. C. SIEGFRIED (Miss)
U. SUBIOTTO (Mrs)
R. VOLTOLINI
G. CLAIRE

Registration of Delegates

M. MATTHEY (Mrs)
G. ANTONIAZZI (Miss)
B. BRADLEY (Mrs)
K. COURVOISIER (Mrs)
L. FERNANDEZ DEL PINO (Miss)
J. GAUTHERET (Mrs)
C. JORGA (Mrs)
D. ZENOBI (Mrs)

Information Service for Delegates

M. M. de REJOD (Mrs)

3 – LIST OF THE DOCUMENTS OF THE VIIth PLENARY ASSEMBLY

3.1 – WHITE DOCUMENTS

AP VII-No.	Source	Title
1	GAS 3	Final Report to the VIIth Plenary Assembly of the CCITT
2	GAS 3	Need for updating of the GAS 4 Handbook "Primary Sources of Energy"
3	SG XV	Final Report on the Questions studied by Joint Working Party LTG
4	SG XV	Series J Draft Recommendations
5	SG VII	Final Report on the work of Study Group VII during the period 1977-1980
6	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III: Proposals for new and revised Series X Recommendations and certain Series A Recommendations
7	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III.2: Recommendation X.25
8	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III.3: Recommendations X.26-X.61
9	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III.4: Recommendations X.70 and X.71
10	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III.5: Recommendation X.75
11	SG VII	Final Report on the work of Study Group VII during the period 1977-1980 Part III.6: Recommendations X.80-X.180
12	SG VII	Final Report on the work of Study Group VII Part IV: Proposed new and revised definitions of terms concerning public data networks Part V: Proposed study programme of Study Group VII for the next plenary period
12 (Corrigendum)	SG VII	Corrigendum to document AP VII-No. 12/COM VII-No. 494
13	SG IV	Final Report of Study Group IV to the VIIth Plenary Assembly
14	SG IV	New and fully revised Recommendations of the "A", "M" and "N" Series
15	SG IV	New and fully revised Recommendations of the "O" Series
16	SG XI	Final Report to the VIIth CCITT Plenary Assembly
17	SG XI	Proposed Recommendations for digital transit exchanges
18	SG XI	Specifications of CCITT common channel signalling system No. 7 (Part III.B of the Report of Study Group XI to the Plenary Assembly)
19	SG XI	Proposed Recommendations for the interworking of signalling systems in SDL presentation, including the interworking with the Maritime Mobile Satellite Service. (Part III.C of the Final Report, Document AP VII-No. 16)

AP VII-No.	Source	Title
20	SG XI	Proposed revised and expanded Recommendations for the CCITT specification and description language (SDL). (Part III.D of the Report of the Study Group XI to the Plenary Assembly)
21	SG XI	Proposed Recommendation for the CCITT High Level Programming Language (CHILL). (Recommendation Z.200)
21 (Corrigendum)	SG XI	Errata in Document AP VII-No. 21/COM XI-No. 396 (CHILL) (This Corrigendum concerns only the English version of AP VII-No. 21)
22	SG XI	Proposed new and revised Recommendations for the CCITT Man-Machine Language (MML) (Part III.F of the Report of Study Group XI to the Plenary Assembly)
23	SG XI	Proposed revisions to Recommendations of signalling system No. 6
24	SG XI	Proposed revised Recommendations for signalling system R2 (Only revised pages are included)
24 (Corrigendum)	SG XI	Errata in Document AP VII-No. 24/COM XI-No. 399
25	SG XI	Proposals for new Recommendations or Amendments to existing Recommendations (Part III.1 to the Report of Study Group XI to the Plenary Assembly, AP VII-No. 16)
26	SG XI	New Questions proposed for study in the 1980-1984 Study Period (Part IV of the Final Report of Study Group XI, Document AP VII-No. 16)
27	SG IV	Maintenance Questions proposed by Study Group IV for the next study period
28	World Plan Committee	Report to the VIIth CCITT Plenary Assembly
29	World Plan Committee	Allocation of Telephone country codes and Telex destination codes
29 (Addendum)	Director of the CCITT	Allocation of Telephone country codes and Telex destination codes
30	World Plan Committee	Questions referred to the CCIs
31	Director of the CCITT	Amendments to Resolution No. 1: Additional rules of procedure of the CCITT
32	Director of the CCITT	Amendments to Resolution No. 2: Accelerated procedure for the provisional approval of Recommendations
33	Canada	Proposals on CCITT organization and working methods
34	SG XII	Draft Resolution of the VIIth CCITT Plenary Assembly
35	SG XV	Amendments to Resolution No. 8 Cooperation with IEC on the standardization of cables, wires, <i>optical fibres</i> and waveguides (New Delhi, 1960; Geneva, 1964; Mar del Plata, 1968; Geneva, 1976)
36	SG VI	Final Report to the CCITT Plenary Assembly
36 (Corrigendum)	SG VI	Corrigendum to Document AP VII-No. 36 (This Corrigendum concerns only the English version of AP VII-No. 36)
37	SG VI	Questions proposed for study in 1981-1984 (Part III of the Final Report, Document AP VII-No. 36)
38	SG X	Final Report to the VIIth Plenary Assembly (Parts I and II) – Introduction and replies to the Questions
39	SG X	Final Report to the VIIth Plenary Assembly (Part III) – New and revised Recommendations, Supplements
40	SG X	Final Report to the VIIth Plenary Assembly (Part IV) – Questions proposed for study
41	Director of the CCITT	Report on the organization of the CCITT Study Groups

AP VII-No.	Source	Title
42	Director of the CCITT	Protection of the names of CCITT defined public services
43	SG XVII	Final Report on the work of Study Group XVII during the period 1977-1980
44	SG XVII	Final Report on the work of Study Group XVII during the period 1977-1980 Part III: Proposed new and revised Series V Recommendations
44 (Corrigendum)	SG XVII	Corrigendum to Document AP VII-No. 44/COM XVII-No. 262 (This Corrigendum concerns only the English version of AP VII-No. 44)
44 (Corrigendum)	SG XVII	Corrigendum 2 to Document AP VII-No. 44/COM XVII-No. 262
45	SG XVII	Final Report on the work of Study Group XVII during the period 1977-1980: Part IV – Proposed Study Programme of Study Group XVII for the next plenary period
46	Director of the CCITT	Technical assistance by the CCITT
47	SG IX	Final Report to the VIIth Plenary Assembly (Parts I and II) – Introduction and replies to Questions
48	SG IX	Final Report to the VIIth Plenary Assembly (Part III) – New and revised Recommendations
49	SG IX	Final Report to the VIIth Plenary Assembly (Part IV) – Questions proposed for study
50	SG XII	Report of the meeting of the Laboratory Working Party, 20-21 March 1980
51	SG XII	Amendments to Recommendations and new Recommendations and their Annexes
52	SG XII	List of Questions for study by Study Group XII during the 1980-1984 Study Period
53	SG XII	New Supplements to Recommendations
54	SG XVI	Amendments to existing Recommendations and new Recommendations and their Annexes
55	SG XII SG XVI	Amendments to Recommendations and new Recommendations and their Annexes
56	SG CMBD	List of Questions for study by CMBD during the 1980-1984 Study Period
57	SG XVI	List of Questions for study during the 1981-1985 Study Period
58	SG XVI	New Supplements to G-Series – Recommendations, Volume III
59	SG CMBD	Amendments to Recommendations, their Annexes and Supplements and new Recommendations and Supplements to G-Series Recommendations
60	SG II	Final Report to the VIIth Plenary Assembly of the CCITT (Parts I and II)
61	SG II	Final Report to the VIIth Plenary Assembly of the CCITT (Part III)
62	SG II	Final Report to the VIIth Plenary Assembly of the CCITT (Part IV)
63	SG II	Final Report to the VIIth Plenary Assembly of the CCITT (Part V)
64	SG III	Final Report of Study Group III to the VIIth Plenary Assembly of the CCITT (Parts I and II)
64 (Corrigendum)	SG III	(Concerns the English version only)
65	SG III	Final Report to the VIIth CCITT Plenary Assembly (Part III)
66	SG III	Final Report to the VIIth CCITT Plenary Assembly (Part IV)
67	SG III	Final Report to the VIIth Plenary Assembly of the CCITT (Part V)
68	SG III	Draft opinion relating to the monetary unit to be used in international telecommunication relations, submitted to the VIIth Plenary Assembly of the CCITT for approval
69	Director of the CCITT	Report on the CCITT Secretariat (including the Laboratory)

AP VII-No.	Source	Title
70	Director of the CCITT	Report to the VIIth Plenary Assembly – Estimate of the financial needs of the CCITT
71	Director of the CCITT	Report on the activity of the CCITT between the VIth and VIIth Plenary Assemblies
72	Director of the CCITT	Special Autonomous Groups
73	SG XV	Final Report to the VIIth Plenary Assembly (Parts I, II and III)
74	SG XV	Final Report to the VIIth Plenary Assembly (Part IV)
75	SG XV	Final Report to the VIIth Plenary Assembly (Part V)
76	SG XV	Final Report to the VIIth Plenary Assembly (Part VI)
77	Director of the CCITT	Chairmen and Vice-Chairmen of CCITT Groups and Working Parties
78	Director of the CCITT	Draft modifications to Resolution No. 3
79	SG XIV	Final Report of Study Group XIV on the work during the Study Period 1977-1980
80	GAS 5	Final Report to the VIIth Plenary Assembly of the CCITT – Part I
81	GAS 6	Final Report to the VIIth CCITT Plenary Assembly
82		Documents for CCI Meetings – Control of volume and observance of time limits for arrival at Headquarters
83		Resolutions and Recommendations adopted by the WARC-79
84	United Kingdom	Working methods of the Study Groups
85	United Kingdom	Working methods of the Plenary Assembly
86	Chairman of GAS 3	Supplement to the Final Report to the VIIth Plenary Assembly (AP VII-No. 1)
87	SG VIII	Final Report to the VIIth Plenary Assembly (Parts I and II) – Introduction and replies to the Questions
88	SG VIII	Final Report to the VIIth Plenary Assembly (Part III – New and revised Recommendations)
89	SG VIII	Final Report to the VIIth Plenary Assembly (Part IV) – Questions proposed for study
90	SG I	Final Report to the VIIth Plenary Assembly (Parts I and II) – Introduction, replies to Questions
91	SG I	Final Report to the VIIth Plenary Assembly (Part III) – New and revised Recommendations
92	SG I	Final Report to the VIIth Plenary Assembly (Part IV) – Questions proposed for study
93	SG I	Final Report to the VIIth Plenary Assembly (Part V) – Definitions
94	SG I	Designation, terms of reference and organization of the work of Study Group I (1981-1984) (Part VI of the Final Report to the VIIth Plenary Assembly)
95	Director of the CCITT	Publication of the 1981 edition of the CCITT Book
96	CMV	Report of the CMV to the VIIth Plenary Assembly
97	CMV	Report of the CMV to the VIIth Plenary Assembly Paragraph 4: Draft Questions
98	JWP SMM	Report to the VIIth Plenary Assembly – Part I (Introduction) and Part II (Formal reply to the Questions assigned to JWP SMM by the VIth Plenary Assembly)
99	JWP SMM	Report to the VIIth Plenary Assembly – Part III (Proposed Recommendations) as approved by Study Groups I, II and III
99 (Corrigendum 1)	JWP SMM	Corrigendum to Document AP VIII-No. 99

AP VII-No.	Source	Title
100	JWP SMM	Report to the VIIth Plenary Assembly – Part IV (Questions proposed for study) as approved by Study Groups I, II and III
101	SG XVIII	Final Report to the VIIth Plenary Assembly (Parts I and II)
102	SG XVIII	Final Report to the VIIth Plenary Assembly (Part III)
103	SG XVIII	Final Report to the VIIth Plenary Assembly (Part IV)
104	SG XVIII	Final Report to the VIIth Plenary Assembly (Part V)
105	CCITT Secretariat	List of the Documents of the VIIth Plenary Assembly
106	Secretary-General of the ITU	Actual costs of the CCITT
107	United Kingdom	CCITT Study Group structures
108	GAS 5	Final Report to the VIIth Plenary Assembly of the CCITT – Part II
108 (Corrigendum)	GAS 5	(Concerns the English version only)
109	French Administration	Proposals for the organization of CCITT Work on the ISDN and new services
110	Belgium	Some comments of the organization of the CCITT
111	Belgium	Organization of the CCITT Plenary Assemblies
112	SG XII	Addendum to Document AP VII-No. 51 – Draft Recommendation on Vocabulary
113	SG XVI	Final Report of Study Group XVI
114	SG CMBD	Final Report of Study Group CMBD
115	SG XII	Final Report of Study Group XII (Report of the Final Meeting)
116	cablé and wireless	Proposed new Question on SCPC multiplexer for Recommendations R.101 and R.111 (Additional point to draft Question 38/VII proposed by Study Group VII in Document AP VII-No. 12/COM VII-No. 494)
117	SG XVI	Corrigenda to Document AP VII-No. 55 (Contribution COM XII-No. 226/COM XVI-No. 132), as agreed by Study Group XVI at the final meeting
118	SG V	Final Report to the CCITT Plenary Assembly
119	SG V	Questions proposed for study in 1981-1984 (Part III of the final Report, Document AP VII-No. 118)
120	Director of the CCITT	Observations on Document AP VII-No. 79
121	Director of the CCITT	Text presentation standards for CCITT
122	WG on Question 7/VI	Final draft of the Handbook on “Jointing of telecommunication cable conductors”
123	Canada	Role of the CCITT in the ITU's overall programme for assistance to developing countries – Draft Resolution
124	Canada	Increased participation in CCITT Study Group work: Proposed draft opinion
125	Canada	Experimental ITU text communication and processing system: Proposed draft opinion
126	Canada	Proposal on CCITT procedures on Terminology
127	Canada	The Terms “Telegraphy” and “Telephony”
128	The Secretary-General	Budget of the VIIth Plenary Assembly
129	CCITT Secretariat	List of the documents of the VIIth Plenary Assembly

3.2 – TEMPORARY DOCUMENTS

Temp. Doc. No.	Title
	3.2.1 <i>Documents of Plenary Assembly</i>
1/PLEN	Draft Agenda of the VIIth Plenary Assembly
2/PLEN	List of Delegates to CCITT meetings and CCITT officials who have died since the VIth Plenary Assembly
3/PLEN	List of Delegates to CCITT meetings and CCITT officials whose retirement has been announced since the VIth Plenary Assembly
4/PLEN	Organization of the VIIth Plenary Assembly
5/PLEN	Amendments to Resolution No. 1 – Additional rules of procedure of the CCITT (Italy)
6/PLEN	Comments on the Study Groups and their work programmes (Italy)
7/PLEN	Draft new Question
8/PLEN	Organization of work on Vocabulary
9/PLEN	Proposals for the work of the CMBD (Netherlands)
10/PLEN	Designation of the time in international telecommunication activities (Director of the CCIR)
11/PLEN	Agenda of the opening meeting
12/PLEN	Agenda of the first Plenary Meeting
13/PLEN	Publication of the new CCITT Book
14/PLEN	Cancelled
15/PLEN	Comments on the final report of Study Group I (Chairman of Study Group I)
16/PLEN	Minor corrections to Recommendations E.200/F.110 and D.90/F.111 – Corrigendum 2 to AP VII-No. 99 (Chairman of joint Working Party SMM)
17/PLEN	ISO/CCITT liaison (United States of America)
18/PLEN	Comparison of expenditures and volume of work between CCITT Study Group periods 1973-1976 and 1977-1980 (General Secretariat)
19/PLEN	Report by the CMTT to the VIIth Plenary Assembly of the CCITT (Director of the CCIR)
20/PLEN	Progress in publication of terms and definitions (General Secretariat)
21/PLEN	Addendum to Document AP VII-No. 55 as agreed by Study Groups XII and XVI at their Final Meetings
22/PLEN	Proposed addendum and corrigendum to supplement No. 20, document AP VII-No. 58 (NTT Japan)
23/PLEN	Corrigendum to Document AP VII-No. 77
24/PLEN	Report on terminology activities in CCITT
25/PLEN	Definition of terms “telegraphy” and “telephony” (General Secretariat)
26/PLEN	List of documents on terminology administration and policy
27/PLEN	Corrigendum to Document AP VII-No. 59
28/PLEN	Publications and related service documents and CCI documentation – volume and cost factors (General Secretariat)
29/PLEN	Recommendations concerning maritime mobile services (Denmark, Finland, Iceland, Norway and Sweden)
30/PLEN + Rev. 1	New system for identifying stations in the maritime mobile and maritime mobile-satellite services (General Secretariat)
31/PLEN	CCITT Study Group action plan (Denmark, Finland, Iceland, Norway and Sweden)
32/PLEN	Agenda of the second Plenary Meeting
33/PLEN	Minutes of the Inaugural Meeting
34/PLEN	Additional rules of procedure of the CCITT (International Telecommunications Users Group)
35/PLEN	Non-parallel pagination in documents and publications (General Secretariat)

Temp. Doc. No.	Title
36/PLEN	Manual for use by the maritime mobile and maritime mobile-satellite services – Contents and printing (General Secretariat)
37/PLEN	Agenda of the third Plenary Meeting
38/PLEN	Cancelled, see Temporary Document No. 50/PLEN
39/PLEN + Rev. 1	Agenda of the fourth Plenary Meeting
40/PLEN	Record note on the ISO/CCITT meeting held in Geneva on 22 September 1980
41/PLEN + Rev. 1 & 2	Report of Working Group on CCITT Book to Plenary Assembly (Chairman, Working Group on CCITT Book)
42/PLEN	Amendments to Study Group IX's Final Report (Corrigendum No. 1 to AP VII-No. 48)
43/PLEN	Minutes of the first Plenary Meeting
44/PLEN	Standardized designation of time in international telecommunication activities (General Secretariat)
45/PLEN	Some considerations on Document AP VII-No. 99 and Corrigendum 1 (Recommendations D.90/F.111, E.200/F.110 and F.130) (General Secretariat)
46/PLEN	Corrigendum to Document AP VII-No. 119
47/PLEN	Administrative provisions relating to the CCITT Laboratory (United Kingdom)
48/PLEN	Minutes of the second Plenary Meeting
49/PLEN	Agenda of the fifth Plenary Meeting
50/PLEN	Cancellation of Temporary Document No. 38/PLEN (President of the Plenary Assembly)
51/PLEN	Reduction of telecommunication tariffs (charges) by Governments (General Secretariat)
52/PLEN	Minutes of the third Plenary Meeting
53/PLEN	Transmission of document from CCIR Study Group 4 to the CCITT VIIth Plenary Assembly (Director of the CCIR)
54/PLEN	Explanatory notes on certain aspects of technical cooperation activities – Procedures governing technical cooperation activities financed by the UNDP (Secretary-General)
55/PLEN	Revised draft opinion relating to the International Monetary Unit (Chairman of Study Group III of the CCITT)
56/PLEN	Agenda of the sixth Plenary Meeting
57/PLEN	Minutes of the fourth Plenary Meeting
58/PLEN	Non-parallel pagination of ITU documents and publications (Secretary-General)
59/PLEN	Agenda of the seventh Plenary Meeting
60/PLEN + Rev. 1	Report by Committee A
61/PLEN	Invitation of Study Group VII meeting (Japan)
62/PLEN	Review of the terms of reference of the CCITT in Opinion No. 9 of the 1976 Plenary Assembly (Special Committee)
63/PLEN	Corrigendum No. 3 to AP VII-No. 99
64/PLEN + Corr.	Use of definition from the Radio Regulations (Director of the CCIR)
65/PLEN	CCITT documents (Secretary-General)
66/PLEN	Summary record of the fifth Plenary Meeting
67/PLEN	Report to the Plenary Assembly on point 2.5 Temporary Document 41/PLEN (Chairman, Working Group on CCITT Book)
68/PLEN	Summary Report of Committee B – Part I
69/PLEN	Draft Opinion (President of the Plenary Assembly)
70/PLEN + Add.	Agenda of the eighth Plenary Meeting
71/PLEN	Minutes of the sixth Plenary Meeting
72/PLEN	Corrigendum to Document AP VII-No. 88
73/PLEN	Summary Report of Committee B – Part II

Temp. Doc. No.	Title
74/PLEN	Report of Committee B – General
75/PLEN	Addendum 2 to the Report of the Committee – Subjects of Handbooks (Chairman of Committee B)
76/PLEN	Record of the Meetings of Working Party 1 of Committee A
77/PLEN	Report of Working Party 2 of Committee A
78/PLEN	Draft Resolution 4, 5 revised
79/PLEN	Report of Committee C
80/PLEN	Report of Committee D
81/PLEN	Proposals made at the Meeting of Heads of Delegation on 20 November relating to the appointment of Study Groups Chairmen and Vice-Chairmen and Chairmen and Vice-Chairmen of the CCITT Joint Working Parties and Autonomous Groups
82/PLEN	Agenda of the ninth Plenary Meeting
83/PLEN	Minutes of the seventh Plenary Meeting
84/PLEN	Minutes of the eighth Plenary Meeting
85/PLEN	Minutes of the ninth Plenary Meeting
86/PLEN	Minutes of the closing session of the VIIth Plenary Assembly
	<i>3.2.2 Documents of Committee A</i>
1/COM A	Documents for CCI Meetings
2/COM A	Resolution CCIR/CCITT – Mixed Working Parties
3/COM A	Coordination of work with CCIR
4/COM A	List of AP VII Documents relating to the work of Committee A
5/COM A	Comments on proposals on the CCITT Telegraphy Study Groups organization (U.S.S.R.)
6/COM A	Distribution of documents and reports (Denmark, Finland, Iceland, Norway and Sweden)
7/COM A	Two amendments to Resolution No. 1 (Federal Republic of Germany)
8/COM A	Agenda of the first meeting of Committee A
9/COM A	Proposal of CCITT organization and working methods (Tanzania)
10/COM A	Continuance of maritime mobile studies by CCITT (International Chamber of Shipping)
11/COM A	Submission and processing of contributions (German Democratic Republic)
12/COM A	Agenda of Working Party 1 – First meeting
13/COM A	Agenda of Working Party 2 – First meeting
14/COM A	Report of the meeting of the Chairmen and Vice-Chairmen of Study Groups VII, XI, XV, XVII and XVIII
15/COM A	Proposals to amend Resolution No. 1, part III, 3 and 4, concerning contributions
16/COM A	Minutes of the first Meeting of Committee A
17/COM A	Proposals agreed by Working Party 1 at its first meeting
18/COM A	Agenda of the second Plenary Meeting of Committee A
19/COM A + Rev. 1	Study of the ISDN (United Kingdom)
20/COM A	Possible evolution of Study Group structure (Drafting group)
21/COM A	Minutes of the second Meeting of Committee A
22/COM A + Rev. 1, 2, 3	Revised titles of Study Groups (Chairman of Working Party A/1)
23/COM A	Summary of discussions in Working Party 1 – Second meeting
24/COM A	Agenda of the third Meeting of Working Party 1
25/COM A	Agenda of the third Meeting of Committee A
26/COM A	Draft Opinion (Drafting Group)
27/COM A	Summary of discussions held in Working Party 1 at its third meeting

Temp. Doc. No.	Title
28/COM A	Report of Working Party 2
29/COM A	Summary of discussions at the fourth meeting of Working Party 1
30/COM A	CMV – terminology (Working Group terminology)
31/COM A	Amendment to Temporary Document No. 29/COM A
32/COM A	Minutes of the third Meeting of Committee A
	<i>3.2.3 Documents of Committee B</i>
1/COM B	Proposed study Question on “scribophone” for Study Groups I and VIII (Netherlands)
2/COM B	Questions set to the CCIs by the Plan Committees
3/COM B	Satellite signalling systems – Question 6/XI (Brazil)
4/COM B + Rev. 1	List of AP VII Documents relating to study Questions
5/COM B	Continuation of the study of Question 4/VII in the next study period – 1981-1984 (Italy)
6/COM B	Draft Resolution on supplementary CCITT publications
7/COM B	Report of the meeting of the Chairmen and Vice-Chairmen of Study Groups VII, XI, XV, XVII and XVIII
8/COM B	Clarifying the relationship between (new) Question 1/XVI and (new) Question B/XVIII (Chairman Study Group XVI)
9/COM B	New Questions (Cameroon, Gabon, Revolutionary People's Republic of Guinea, Senegal, Tunisia, Togo)
10/COM B	Reapportionment of material between (new) Question 1/XVI and (new) Question 5/XVI (Chairman of Study Group XVI)
11/COM B	Draft new Question (21/I) (Chairman of Committee B)
12/COM B	Cancelled
13/COM B	List of Questions
14/COM B	Agenda of the first Meeting of Committee B
15/COM B	Cancellation of Temporary Document No. 12/COM B
16/COM B	List of Questions of Joint Study Group CCIR/CCITT CMTT
17/COM B	Transmission standards of terminal equipment using I.A.5 (Chairman of Study Group VIII)
18/COM B + Corr.	Draft Addendum to new Question 8/XI (France)
19/COM B	Proposed additional text for Annex 3 to Question B/XVIII (Intelsat)
20/COM B	New Questions (UNESCO)
21/COM B	Continuation of Question 6/XI (Chairman of Study Group XI)
22/COM B	Proposed amendment to the Wording of Question J/II (Chairman of Study Group II)
23/COM B	Question Y/II on models for international network planning (Chairman of Study Group II and Chairman of the Plan Committee for Europe)
24/COM B	Text for Report of Committee B (Chairman of Committee B)
25/COM B	Annexes to Questions (Chairman of Committee B)
26/COM B	Corrigendum to Temporary Document No. 13/COM B
27/COM B	Minutes of the first Meeting of Committee B
28/COM B	Draft Report – General (Chairman of Committee B)
29/COM B	Cancelled
30/COM B	Amendments to wording of Questions 7/IV and A/IV (Chairman Study Group IV)
31/COM B	Additional note to Question Y/II (Chairman of the Plan Committee for Europe and Chairman and Vice-Chairman of Study Group II)
32/COM B	Draft addendum to new Question 8/XI (Chairman of Study Group XI)

Temp. Doc. No.	Title
33/COM B	Proposed text for draft Question 24/VIII – Terminal equipment for the “telewriting” service (Ad-hoc Group)
34/COM B	Proposed text for Question 20/I – Telewriting service (Ad-hoc Group)
35/COM B	Proposed text for Question 24/VII – Transmission of “telewriting” over the telephone network (Ad-hoc Group)
	<i>3.2.4 Documents of Committee C</i>
1/COM C	Agenda of the first Meeting of Committee C
2/COM C	Agenda for the second and last meeting of Committee C
3/COM C	Situation of accounts of the VIIIth CCITT Plenary Assembly at 15 November 1980 (Secretary-General)
4/COM C	Revised Agenda of the second and last Meeting of Committee C
5/COM C	Draft Report by Committee C (Chairman of Committee C)
6/COM C	Summary record of the first Meeting of Committee C
7/COM C	Summary record of the second and last Meeting of Committee C
	<i>3.2.5 Documents of Committee D</i>
1/COM D	Questions set to the CCIs by the Plan Committees
2/COM D + Rev. I	Considerations on technical assistance to the developing countries (Brazil)
3/COM D	Draft Resolution on supplementary CCITT publications
4/COM D	List of Documents of the VIIth Plenary Assembly concerning Committee D
5/COM D	Proposal of CCITT organization and working methods (Tanzania)
6/COM D	Agenda of the first Meeting of Committee D
7/COM D	Agenda of the second Meeting of Committee D
8/COM D	Agenda of the third Meeting of Committee D
9/COM D	Conclusions relating to “technical assistance by the CCI’s” reached by the World Plan Committee (Chairman of Committee D)
10/COM D	New Question (Cameroon, Gabon, Revolutionary People’s Republic of Guinea, Senegal, Tunisia, Togo)
11/COM D	Technical assistance to the developing countries (Cameroon, Gabon, Revolutionary People’s Republic of Guinea, Senegal, Tunisia, Togo)
12/COM D	Special Autonomous Working Party (GAS) on optical fibre cables and systems (Saudi Arabia)
13/COM D	Report of Meeting held to develop a draft Resolution dealing with technical assistance to the developing countries (Small Preparatory Group of Working Party D.1)
14/COM D	Consideration of technical assistance to the developing countries (Algeria, Iraq, Kuwait, Jordan, Lebanon, Mauretania, Morocco, Qatar, Saudi Arabia, Syria, Sudan, Tunisia)
15/COM D	Proposal for a new Handbook (France)
16/COM D	Minutes of the first Meeting of Committee D
17/COM D	Agenda of the fourth Meeting of Committee D
18/COM D	Report of Meetings held to develop a draft Resolution dealing with technical assistance to the developing countries (Working Party 1 of Committee D)
19/COM D	Summary Record of the second Meeting of Committee D
20/COM D	Draft Report by Committee D to the Plenary Assembly (Chairman of Committee D)
21/COM D	Decision on division of subjects
22/COM D	New GAS Economical and technical aspects of the transition from analogue to digital telecommunications networks
23/COM D	Summary Record of the third Meeting of Committee D
24/COM D	Summary Record of the fourth and last Meeting of Committee D

4 – MINUTES OF THE PLENARY MEETINGS

Chairman: Mr. D. GAGLIARDI (Italy)

INAUGURAL MEETING

(Minutes amended at the ninth Plenary Meeting)

Monday, 10 November 1980, at 11.30 hrs

Subjects discussed:

- 1 Opening of the VIIth Plenary Assembly and election of Chairman and Vice-Chairmen
- 2 Address by Mr. L. Burtz, Director of the CCITT
- 3 Address by Mr. R. C. Kirby, Director of the CCIR
- 4 Address by Mr. M. Mili, Secretary-General of the ITU
- 5 Address by the Chairman of the Plenary Assembly

1 Opening of the VIIth Plenary Assembly and Election of Chairman and Vice-Chairmen

- 1.1 *Mr. Burtz*, Director of the CCITT, declared open the VIIth Plenary Assembly of the CCITT.

On behalf of the Heads of Delegation, he proposed the nomination of Mr. Gagliardi of the Italian Administration to the office of Chairman.

Mr. Gagliardi was elected by acclamation and took his place as Chairman.

He expressed his appreciation to the Assembly for the honour paid to his country and to himself and the hope that he would perform successfully the difficult task entrusted to him, with the aid of the Vice-Chairman, the Chairmen of Study Groups, the Director and Specialized Secretariat of the CCITT and especially with the collaboration of all participants.

The *Chairman* announced that the meeting of Heads of Delegations had agreed to propose five Vice-Chairmen: Mr. P. R. H. Balduino (Federative Republic of Brazil), Mr. Yang Tai Fang (People's Republic of China), Mr. R. H. Howarth (United States of America), Mr. P. O. Okundi (Nigeria) and Mr. P. N. Voronine (U.S.S.R.).

The proposal was *endorsed* and the five Vice-Chairmen took their place on the rostrum.

2 Address by the Director of the CCITT

Mr. Burtz delivered the address reproduced in Annex A.

3 Address by the Director of the CCIR

Mr. Kirby delivered the address reproduced in Annex B.

4 Address by the Secretary-General of the ITU

Mr. Mili delivered the address reproduced in Annex C.

5 Address by the Chairman

Mr. Gagliardi delivered the address reproduced in Annex D.

The *Chairman* declared closed the inaugural meeting of the VIIth Plenary Assembly.

The meeting rose at 1230 hours.

ANNEX A

Address by Mr. L. Burtz, Director of the CCITT

“Mr. Chairman,

Allow me to congratulate you very warmly on your election to the important office of Chairman of the VIIth Plenary Assembly. As a Director of the Italian Administration's Higher Institute of Posts and Telecommunications and as Chairman of many committees of international telecommunication bodies, including particularly CCITT Study Group XV, you are eminently qualified to conduct our meetings. Thanks to your wide experience and your ability, our work in the coming ten days will, I am convinced, be successful, and will enable the CCITT to achieve highly constructive results in the tasks confronting it.

I also present my warmest congratulations to the five Vice-Chairmen elected by the Assembly. I am confident, Mr. Chairman, that you can count on their help and that they will spare no effort to assist you in your endeavours.

Ladies and Gentlemen,

I am very pleased to welcome all of you who have come in such large numbers to take part in the work of our VIIth Plenary Assembly. Initially, we had contemplated holding this meeting outside Geneva, but in the meantime the terms for renting this building have been greatly eased while it is now becoming very costly for an Administration to host a gathering as large as this.

This large attendance testifies to your great interest in our activities and I am particularly pleased to extend you all the most cordial welcome. Thanks to your active collaboration, the labours of the Assembly are bound to prove extremely productive.

I also wish to thank my colleagues in the ITU Coordination Committee, Mr. Mili, our Secretary-General, Mr. Butler, the Deputy Secretary-General, Mr. Berrada, the Chairman of the IFRB and Mr. Kirby, the Director of the CCIR, for their participation. Their presence demonstrates, to my great satisfaction, that the Union's four permanent organs are collaborating ever more closely.

Mr. Chairman, Ladies and Gentlemen,

The study period 1977-1980 was marked by substantial and productive activities in all sectors of the CCITT. We shall of course return to this point more fully in the next few days, when we come to examine the reports of the various Study Groups and the activity report presented by myself. For the time being, may I quote a few figures to illustrate briefly the ever widening scope of this activity: during this study period, 1200 meeting days were held with a delegate participation of more than 12 000, representing, apart from Administrations, 50 recognized private operating agencies, 140 scientific and industrial organizations and some thirty international organizations. The numbers registered in the various Study Groups are close to 8000: 4000 for Administrations, 1500 for recognized private operating agencies, 2000 scientific or industrial organizations and 500 for international organizations. The number of contributions received and published is steadily increasing; the figure now stands at over 6000 (70% more than during the previous study period), and the work of the Study Groups has led to the framing of 204 Recommendations (compared with 127 for the previous period). Moreover, 187 existing Recommendations have been thoroughly revised. Questions proposed for study during the next period also show an increase (353 against 332 for the period 1977-1980).

These very promising statistics might suggest that the CCITT is thriving, that we are not up against any major problems, and that all we have to do is carry on as before. This would, however, be a very hasty conclusion and one which would call for drastic correction. Recent telecommunication developments have been so rapid and indeed so revolutionary as to upset our entire organization. With the dramatic expansion of the data network the advent of “telematics”, i.e. Teletex, Videotex, facsimile and other new services, and with the radical changes which are bound to ensue from the future integrated services digital network, modern telecommunications are being revolutionised. This calls for still closer collaboration among international authorities if we are to bring about, with minimum delay the essential standardization of equipment and services.

These arguments demonstrate the need for overhauling the organization of the CCITT Study Groups and its secretariat and also of our working methods. As regards our workload, we have reached breaking point, both in the CCITT Secretariat and in the General Secretariat's common services, owing to the spate of documents (contributions, reports, etc.) which cause congestion, particularly in the language and reproduction services, thus greatly adding to our costs. It is absolutely essential to cut down this plethora of paper and at the same time improve the distribution of CCITT information. This is a particularly difficult problem which our Assembly will have to face.

It would also be extremely desirable to make the accelerated procedure for the provisional approval of Recommendations more flexible, to enable us to keep up with the rapid evolution of technology and meet the criticism, often levelled at us in the past and still justifiable, that the pace of our work is too slow. The production of equipment by the industrial organizations is to some extent dependent on the standards laid down by the CCITT. It is therefore essential that Recommendations which are deemed urgent and which relate to standards should be circulated and put into effect as rapidly as possible.

These points bear largely on the conventional work of our Study Groups. There are two other important features of our activity to which I should like to refer: one of them relates to the practical application of our studies and to the dissemination of information more suited to the needs of those unable to attend Study Group meetings regularly: this is an important activity of particular interest to the developing countries and will certainly be discussed in greater detail in Committee D.

The other aspect concerns our relations with various other organizations also dealing with telecommunications, such as ISO, IEC, IMCO, OECD and UNESCO; the lines of demarcation between ITU and those other organizations are becoming increasingly blurred which means that collaboration is ever more essential. This is a problem of external relations; the CCITT must continue to make its presence felt in order to uphold the ITU's universally recognized prestige.

Mr. Chairman, Ladies and Gentlemen,

There are of course many other important problems relating to the activities of the CCITT: they will be discussed in the various Committees set up in order to facilitate our work. As you will have realized, the VIIth Plenary Assembly is facing a very difficult task. In this period of rapid change in telecommunications, new directives must be established in many fields in order to ensure maximum efficiency for all members of the CCITT.

It is in expressing this hope that I extend to you, Mr. Chairman, my very best wishes for your success."

ANNEX B

Address by Mr. R. C. Kirby, Director of the CCIR

"Mr. Chairman,
Mr. Director,
Mr. Secretary-General,
Mr. Deputy Secretary-General,
Mr. Chairman of the IFRB,
Distinguished Delegates,
Ladies and Gentlemen,

It is my privilege and honour to be invited by your Chairman and your Director to address on behalf of CCIR this opening of the CCITT VIIth Plenary Assembly.

A CCITT Plenary Assembly is one of the grand events in the telecommunication world. The CCIR and CCITT studies have, for more than fifty years, provided progressively wider and more vital technical bases for transmission standards in international telecommunications, and for efficient, compatible uses of the radio frequency spectrum. The CCI's provide also today the world forum for discussion and exchange of information at a technical planning level, on new telecommunication services and new methods for using the radio frequency spectrum.

The CCIR held its XIVth Plenary Assembly at Kyoto, Japan, in 1978, and celebrated its 50th anniversary. The Plenary Assembly approved a number of important Recommendations for satellite and terrestrial radiocommunications, and also set up the Special Preparatory Meeting for the World Administrative Radio Conference, 1979. With the participation of 85 countries, that Special Preparatory Meeting provided substantially the technical bases for the WARC-79.

The WARC-79, in turn, addressed a large array of questions to CCIR for the future, for technical information for radio conferences to take place in the early 1980's, and for Recommendations for use in connection with the Radio Regulations themselves. Thus, much of CCIR's programme for the early 1980's will be devoted to providing a technical basis for international radio regulation.

In CCITT and CCIR work, there are a number of areas of close collaboration between the two organizations. The future of digital networks is one such area today, and maritime satellite applications is another.

The Joint Study Groups for which CCIR is responsible enjoy strong participation from both CCI's. The CMV, the Joint Study Group on Vocabulary, recently concluded its Interim Meeting and reported its progress in a document to the CCITT Plenary Assembly. It is my view that the CMV is a valuable means to coordinate telecommunication terminology in the ITU, and to provide an interface with the IEC/CCI Joint Group on Vocabulary. I recommend the continuation and strengthening of CMV.

CMTT, the Joint Study Group on Television and Sound Programme Transmission, also met in the past few weeks, and its report has been submitted to this Plenary Assembly. Discussions on performance criteria for sound and television programme channels, methods of measurement, and digital transmission and multiplexing, again showed the indispensability of CCIR/CCITT joint study of these questions.

CCIR has also been working increasingly closely with the CCITT in the activities of the World and Regional Plan Committees. CCIR has cooperated with your Director in his admirable initiative to develop special information programmes in connection with the Plan Committee meetings, and we have provided experts on radio topics for these programmes. We have also especially encouraged the development of appropriate Questions in the radio area from the Plan Committees which could increase the relevance of CCIR work to developing countries.

I have mentioned only a few facets of CCIR/CCITT collaboration. I am sure you are by now aware of several such efforts at the Secretariat level, undertaken jointly by the Directors. Also, Special Rapporteurs between Study Groups aid such collaboration. Mr. Burtz and I have identified one further vehicle for cooperative studies on a short-term basis. We have suggested in a joint document to your Plenary Assembly a provision for setting up, for brief periods in the intervals between Plenary Assemblies, Mixed Working Parties to study specific questions of joint interest to two or more CCIR/CCITT Study Groups, to report to the concerned Study Groups. It is perhaps most important that such cooperation between CCIR and CCITT activities continue to increase within Administrations themselves.

On a wider scale, I can assure you that a current CCIR Study of its organization and working methods, includes in its considerations means to strengthen further the collaboration between CCIR and CCITT.

CCIR Interim Study Group Meetings have concluded only during the past week. Among the topics studied by Study Group 4, on satellite fixed services, was digital transmission. It is clear that the satellite link, as part of the Integrated Services Digital Network, is an area of growing importance of CCIR Studies of interest to CCITT. Study Group 9, on radio-relay systems, also made further progress toward digital microwave system Recommendations. Study Group 11, on Television Broadcasting, prepared a draft Recommendation on digital television transmission which has been forwarded to CCITT for the concerned Study Groups. A report is also submitted to your Plenary Assembly on the progress of the Joint Ad Hoc Working Party on Alphanumeric and/or Graphic Displays on Television Receivers, including its suggestions for future work. Study Group 11 also requested especially to have the opportunity to report briefly to your Assembly on progress in broadcast teletext and data transmission; the Chairman of the Working Party, Professor Cappuccini of Italy, is prepared to join us at the appropriate time to present this verbal report.

Study Group 8, on mobile services, will hold its meeting in two weeks time, but has made important progress in maritime mobile studies, especially the Maritime Mobile-Satellite Service. Studies have begun on the Public Land Mobile Telephone System and on data transmission in the Land Mobile Service, both foreseeing close collaboration with CCITT.

In quite a different vein, I would like to mention a CCIR Recommendation on Coordinated Universal Time (UTC). As you know, the CCIR is responsible for studies on standard time and frequency. A Recommendation approved by the XIVth Plenary Assembly recommended the use of Coordinated Universal Time (UTC) to replace GMT in the Radio Regulations and in all international telecommunication applications. The substance of the Recommendation was adopted by the WARC and UTC is now used in the Radio Regulations. It remains now for other telecommunication applications to take advantage of this improved universal time scale, which has already been adopted as standard time by many countries. It is based on an atomic time scale and the new definition of the second, as from 1967, and is tied to frequency standards throughout the world. It enables unambiguous timing of events in remote parts of the world with an uncertainty of less than 1 microsecond. On the other hand, astronomical time scales, including GMT, because of variation in the Earth's speed of rotation, can be different from Coordinated Universal Time by up to about 1 second. The UTC time scale is of special importance in the era of growing use of high speed digital systems, and the need for precise time and frequency standards. The CCIR would commend to the CCITT the use of the UTC time scale.

In the area of technical cooperation, both the CCIR and CCITT are committed to increasing relevance of their work to developing countries. CCITT progress in this field is commendable. CCIR's objectives are set out in its Resolution No. 33-3. Besides cooperation in the GAS activities, several Study Groups have recently begun work on handbooks. CCIR Handbooks are being prepared by three Study Groups, on computer aids to frequency management, on television and sound recording techniques, and on satellite fixed service planning.

I cannot close these remarks without a special acknowledgement of your Director, with whom I work on a daily basis. Freddy Burtz's vast experience in international telecommunications, and dynamism in the affairs of ITU are great resources to CCIR as well. I must confirm to you that his spirit of wholehearted cooperation with CCIR has been an important factor in our being able to deal jointly with many problems of common interest. He is constantly ready to join together in any task which appears to strengthen the work of the CCI's on behalf of the ITU membership.

I thank you very much for the opportunity for these remarks, and I wish you a most successful meeting."

ANNEX C

Address by Mr. M. Mili, Secretary-General of the ITU

“Mr. Chairman,

I take great pleasure in extending to you, on behalf of the ITU, my warmest congratulations on your outstanding election as Chairman of the VIIth CCITT Plenary Assembly. This choice has my wholehearted endorsement and is a supreme testimony to this Assembly's appreciation of the interest that your country and you yourself have always displayed, not only in the work of the CCITT, but in the activities of our Union as a whole.

In particular, the effective backing that the Italian Administration has unfailingly given to the ITU has always been greatly appreciated. In the technical area, where Italian engineers have given us the benefit of their energy and ability; in the regulatory domain, where Italian specialists and jurists have distinguished themselves by their learning and judgment; and in technical cooperation, where Italian experts are exemplary in their industry and conscientiousness, Italy is always present with its unstinting support for all our activities.

All this explains the pleasure we feel at seeing you here on the podium as Chairman to give us the benefit of your skill and experience. I thank you for this on behalf of the ITU.

I should also like to congratulate the five Vice-Chairmen who will do their utmost to assist the Chairman, putting all their competence and knowledge at his disposal, to ensure the success of this Plenary Assembly.

Ladies and Gentlemen,

After these few words of congratulation to our Chairman, may I be permitted to wish you a cordial welcome to Geneva, the headquarters of our Union, and a very pleasant stay among us. Although you have a difficult task ahead of you, you will deal with it with your traditional competence, to the benefit of the harmonious development of the World Telecommunication Network.

I need hardly remind you here of the admirable work carried out by the various Study Groups, since all the efforts made over the past study period and the results achieved in all the areas within the purview of the CCITT are unanimously appreciated at their true worth. I should like, however, to draw attention to two major problems which will revolutionize the World Telecommunication Network in the next decade.

First of all, the spectacular expansion of all present telecommunication services, which is also to be anticipated with future ones, compels us to rethink the network configuration completely with a view to total integration.

This Plenary Assembly is thus meeting at a moment of exceptional importance: with the emergence of telematics, consisting of the integration of telecommunications and computers, we are about to embark upon a new and vital phase, namely, the worldwide computerization of society.

According to the experts – and I am quoting one of them – data processing techniques will therefore “spread even more rapidly than electricity did in the early stages of industrialization”.

I do not propose to dwell at great length on this subject. I have referred to it mainly to bring out the ever-increasing importance of the rôle that the CCIs will be called upon to play during the coming years: will not the advent of the computerized society have to match the challenge of the 1980s?

The integration of telecommunication-computer-robot networks, however, cannot be achieved without the worldwide standardization towards which the International Consultative Committees have been working for over half a century.

The creation of the computerized society must also be attended by a suitable transfer of modern technology. As far as telecommunications are concerned, I think that I can confidently reaffirm that in this field the CCIs are achieving outstanding results.

The second point I should like to raise concerns the need to respond quickly to the new requirements which are constantly emerging and which call for a speeding up of your activity to make it possible for equipments fully meeting these requirements to be standardized as soon as possible. Facsimile – to use a word which is well-known and which may cover all existing or future equipments – is already emerging as an appropriate means of meeting the needs of a widely varying range of users.

In both cases, the traditional imagination and vigour of the CCITT will enable our Union to remain in the vanguard of progress.

For example, it is gratifying to note that a single study period has sufficed to lay the foundations for what are conventionally known as new services. The results already obtained in this area, sometimes representing a satisfactory compromise achieved at the cost of strenuous effort and discussion, certainly constitute a reasonable starting point for your future labours.

Another point worth raising is the proposal by members of Study Group I that its terms of reference should be extended to cover both telecommunications and informatics. Such a move on the part of your Assembly – and I have no doubt that such a step is possible – would give a new dimension to our Union's activities. In acting thus, the ITU would only be following its century-old tradition which has enabled it, ever since its inception, to adjust to new technological developments in all circumstances.

These new responsibilities, which the CCITT will be anxious to assume in the most favourable conditions, will prompt you to give close attention to the organization of your work. Some of the documents put before your Assembly contain some extremely shrewd and welcome suggestions. The intention is to streamline the working methods of the CCITT in the interests of greater economy and higher efficiency.

Efficiency; economy: these are two watchwords which should be constantly borne in mind if our Union is to be enabled to meet all the challenges facing it. I am confident that all the delegations present here will be particularly anxious to take into account the financial implications which any decision might have for the budget of the Union or, in effect, for the budgets of their own Administrations.

The Administrative Council, which is responsible for ensuring that all the activities of the Union proceed smoothly, adopted at its latest session Resolution No. 847 of which you should take full heed. This Resolution, entitled "Documents for CCI meetings – control of volume and observance of time limits for arrival at Union Headquarters for processing", comprises three main points:

- review of the study programme with a view to eliminating those Questions for which there is little interest or urgency;
- limitation of contributions to those which are absolutely essential for the study of Questions and observance of time limits to permit efficient processing;
- search for the best methods of ensuring rapid and efficient distribution of documents.

A few facts and figures may help to bring out the importance of these directives.

Over the last study period (1977-1980), a considerable increase was recorded in the services provided by the General Secretariat as compared with the previous period (1973-1976).

This increase represents 36% for translation, 13% for text composition and 18% for offset printing. The persistence of such a trend would be impossible to sustain, particularly if the forecasts continued to be overshoot by the same amounts as in the past few years.

For some time now, the highest percentage has been accounted for by the translation work done for the CCITT. The following example may be provided for purposes of comparison: in 1979 we translated 20 778 pages for the CCITT, whereas the corresponding figure for the World Administrative Radio Conference 1979 was only 12 400, representing a difference of nearly 70%.

Moreover, to ensure maximum efficiency in the work of Study Groups, it is essential to keep within the estimates, since the translation and reproduction services must be strictly planned in order to remain within the budgetary allocations and especially in order to find the necessary skilled staff on the labour market.

Owing to the highly technical nature of contributions, it is very difficult to find qualified technical translators, especially those working in French and Spanish.

To overcome all these difficulties, however, we have taken action on two fronts. On the one hand, we have launched a wide campaign for the recruitment of qualified translators in all the countries where they might be available. On the other hand, we have collected in glossary form a large number of the terms and expressions now used in CCI documents. The Language Division has thus been able to assemble a collection of references to improve the quality of the documents produced in the three working languages of the Union.

Other improvements have been introduced, resulting in savings of time and money, by means of a text capture system. The storage of texts as they are adopted by the various Study Groups and the speed with which corrections or amendments can be made will enable us to publish the *Yellow Book* in less than twelve months, although we foresee a 48% increase in the number of pages in this new Book in relation to the *Orange Book*.

These new methods of text reproduction impose on us certain constraints which must be observed. In particular, I would ask you to comply strictly with the provisions of Document AP VII-No. 121, in order to avoid all delay in text processing and to take full advantage of the benefits of the new system.

I have just mentioned the higher workload. Now I must turn to another question, namely the greater size of individual documents, which are becoming increasingly voluminous. I think that the record is reached by Document AP VII-No. 18, which comprises over 400 pages and weighs 900 grams. Several other documents contain well over 200 pages and fall into the 500-gram middle-weight category.

Documents of this bulk raise problems at all levels: at the translation level to begin with, where a single reviser is monopolized by one document to ensure some measure of uniformity. Then coordination is required between the typing pool and the text composition service, to determine which parts of the documents should be dealt with by each service. Then in reproduction, where the number of copies may reach 2000. Then in preparing batches of documents for dispatch, where the automatic sorting system has had to be abandoned and sets have to be assembled manually. In storage, since our available shelf space has proved insufficient for such large quantities of bulky documents, we have therefore had to resort to pallets, which have to be moved around on pallet trucks.

I must apologize for imposing all these details on you, but I think it is my duty to keep you informed of all the practical problems caused by big documents, which we have to solve if the efficiency of ITU work is to be kept up to the mark.

Ladies and Gentlemen,

I have left to the last some general points concerning the highly important problem of the participation of the developing countries in the work of the CCITT. Although this question will be widely debated in Committee D, I should nevertheless like to emphasize the worldwide scope of the CCITT.

It is interesting to note that the worldwide authority of the CCITT was referred to at the IInd Plenary Assembly at New Delhi in 1960, and that since then much has been done to imprint this new orientation on the CCITT.

The VIIth Plenary Assembly will certainly be anxious to strengthen this trend further by the decisions which it is sure to adopt, not only with regard to the new Questions set for study, some of which will bear particularly on the developing countries, but also with regard to the Study Groups' working methods.

In particular, the spreading out of meetings as hitherto practised no longer seems to meet the new responsibilities of the CCITT and should therefore be abandoned in favour of concurrent meetings of several Study Groups. This seems to us to be much more important than, for example, attempting to hold certain meetings away from Union Headquarters.

In the connection, I would remind you that, thanks to the generosity of the Swiss authorities, the premises of the CICG are now available free of charge and that holding concurrent meetings of several Study Groups need cause no difficulties. I very much hope that the Plenary Assembly will take due account of these new circumstances. The need to adapt the working methods and organization of the CCITT to new problems as they arise has been emphasized so often in the past that I feel that the Secretary-General of the ITU is dispensed from labouring the point any further.

Mr. Chairman, Ladies and Gentlemen,

I have always stressed the fundamental importance of the work of the CCIs and the pivotal position which these two permanent organs occupy in the ITU. By their work, which is so essential to the harmonious development of the World Telecommunication Network, they make a vital contribution to the universal influence of the ITU.

I am firmly convinced that the decisions adopted by this VIIth Plenary Assembly, which is being held at a crucial point in the history of our Union, will help to reinforce this worldwide influence. With all my heart, I wish you every success in your endeavours."

ANNEX D

Address by Mr. D. Gagliardi, the Chairman of the VIIth Plenary Assembly

"Mr. Secretary-General and Mr. Deputy Secretary-General,
Mr. Chairman of the IFRB,
The Directors of the CCITT and the CCIR,
The Vice-Chairmen,
Ladies and Gentlemen,

Allow me first of all to extend the most cordial welcome to all those attending this Plenary Assembly, to wish them a pleasant stay in Geneva and to thank the previous speakers wholeheartedly for the nice things they have said about me.

It seems to me that the work of the VIIth Plenary Assembly is bound to be rich in both interest and promise: firstly, the culmination of four years of highly intensive and productive activity and secondly, the establishment of the programme and the organization for the four coming years.

You have just heard from the Director of the CCITT a few impressive figures reflecting the activities over the past period; you have heard some extremely interesting remarks by the Secretary-General. I think that we may all be proud, since the results achieved are clear evidence that the CCITT has succeeded in meeting the challenge of technological progress over the past few years.

Confronted by such an enormous range of new services and new and rapidly evolving technical structures, there was a very clear risk that a standardizing organization such as the CCITT would either fall behind in the race or be led into blind alleys. These two hazards have been avoided and we may confidently say that, so far, the CCITT has won through.

In the next few days, in considering the reports of the various Study Groups, we shall be able to gauge the extent of this victory, the credit for which is due partly to the delegates and experts, of the various countries who have worked in the Study Groups and Working Parties and secondly, and particularly, to all the staff of the CCITT, in the first place the Director and his technical personnel who have readily placed all their energy and skill at our disposal.

However, the battle is of course in a sense still raging, and the coming years, in which we shall increasingly follow a path leading towards the integrated digital network, new services and new transmission equipment and media will confront the CCITT with a number of problems which are bound to be more complex than those hitherto encountered. I am convinced that the work of the next few years will prove decisive for the harmonious development of the integrated services digital network.

We are all aware of the difficulties, both economic and organizational, facing the organs of the Union and the Administrations themselves in dealing with their tasks, both quantitatively and qualitatively. The previous speakers have conveyed a very striking impression of these difficulties, which are liable, unless the appropriate action is taken, to impair substantially the efficiency of our work and also our ability to take certain important decisions in good time.

I think that this Plenary Assembly should expend considerable effort in improving the efficiency of work by adopting, at the end, very sound and firm decisions.

In detail, the problems arising are as follows:

- those concerning the structure, which should be improved with a view to greater uniformity and alignment with the development of the telecommunication services, but which should also be modified in such a way as to avoid any break in continuity, which might lead to unacceptable delays in dealing with questions;
- those relating to the organization of the work; here the aim should be to cut the costs of meetings and documentation without at the same time causing questions to be dealt with either more slowly or more superficially;
- the programme of technical activities, which should be prepared with a view to meeting all requirements, particularly the most urgent ones, of all the countries Members of the Union.

The tasks facing us are difficult and our programme is an ambitious one particularly in view of the limited time available; however, in my view, this will be a measure of the success of this VIIth Plenary Assembly. With a common effort and a common will, I am sure that we shall succeed: the VIIth Plenary Assembly, just like its predecessors, will constitute a cornerstone in the history of the CCITT.

On this note, I would express to you my best wishes for the success of your endeavours.

Thank you."

FIRST PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Monday, 10 November 1980, at 15.05 hrs

Subjects discussed:

- 1 Tribute to deceased delegates
- 2 Acknowledgements to retired delegates
- 3 Setting up of Committees, election of Chairmen and Vice-Chairmen of the Committees and members of the Editorial Committee
- 4 Appointment of the Secretariat of the Assembly
- 5 Approval of the Agenda for the first week of the Plenary Assembly
- 6 Adoption of working hours
- 7 Statements
- 8 Publication of the new CCITT Book
- 9 Report by the Director on CCITT activities
- 10 Report by the Director on the CCITT Secretariat

1 Tribute to deceased delegates (Appendix I)

- 1.1 The *Director of the CCITT* delivered the statement reproduced in Annex A.
- 1.2 The Assembly observed a minute of silence in memory of the deceased delegates.

2 Acknowledgements to retired delegates (Appendix II)

- 2.1 The *Director of the CCITT* said that the list of retired delegates in Temporary Document No. 3/PLEN. was incomplete and would be supplemented when the necessary information was received. He wished all the delegates concerned a happy retirement.

2.2 The *Chairman* said he was sure that the Plenary Assembly would wish to associate itself with the Director in wishing the delegates in question a pleasant retirement in tranquility and good health.

3 Setting up of Committees, election of Chairmen and Vice-Chairmen of the Committees and members of the Editorial Committee

3.1 The Assembly set up five Committees and elected the Chairmen and Vice-Chairmen of four Committees and the members of the Editorial Committee proposed by the meeting of Heads of Delegations, as follows:

Committee A – (Organization of Study Groups and working methods)	Chairman:	Mr. A. R. BASTIKAR (Canada)
	Vice-Chairmen:	Mr. T. IRMER (Federal Republic of Germany) Mr. W. G. SIMPSON (United Kingdom)
Committee B – (Work programme of Study Groups)	Chairman:	Mr. M. THUÉ (France)
	Vice-Chairmen:	Mr. M. KATO (Japan) Mr. M. MBAYE (Senegal)
Committee C – (Budget control)	Chairman:	Mr. L. KATONA KIS (Hungary)
	Vice-Chairmen:	Mr. M. RADZI (Malaysia) Mr. F. AL-MAJID (Kuwait)
Committee D – (CCITT technical assistance)	Chairman:	Mr. M. ALI BELHADJ (Algeria)
	Vice-Chairmen:	Mr. A. DARMAN (Indonesia) Mr. L. DI BENEDETTO (Argentina)
Editorial Committee –		Mr. J. LAROCLETTE (France) Mr. R. F. COLEMAN (United Kingdom) Mr. J. A. ROLDÁN (Spain)

4 Appointment of the Secretariat of the Assembly

4.1 The *Director of the CCITT* announced that he would act as Secretary of the Assembly, with the assistance of Mr. M. Malek Asghar. The following officials would act as Committee Secretaries:

Committee A – Mr. I. Savitsky
 Committee B – Mr. E. Hummel
 Committee C – Mr. R. Prélaz, assisted by Mr. J. Escudero
 Committee D – Mr. R. Chapuis
 Editorial Committee – Mr. G. Turnbull

5 Approval of the Agenda for the first week of the Plenary Assembly (Temporary Document No. 1/PLEN.)

5.1 The *Chairman* said that the report of the CMTT should be added to those proposed for consideration at the third plenary meeting on Wednesday, 12 November.

He announced that a telex had just been received from the Director-General of the Mexican PTT Administration asking that the order of the reports proposed for consideration at the fourth and fifth plenary meetings on Thursday, 13 November, and Friday, 14 November be reversed or, if that proved impossible, that consideration of the reports of Study Groups VII and XVII be transferred from the fourth to the fifth plenary meeting.

5.2 The *Director of the CCITT* said that the proposed change could be made if the Assembly had no objection. The main point was to establish a definitive Agenda as soon as possible, to enable Administrations to send experts to the relevant meetings.

5.3 The *delegate of the Federal Republic of Germany* pointed out that, since the reports of Study Groups VII and XVII were closely connected to those of Study Groups IX and X, it would be preferable to make the total change requested by the Mexican Administration.

5.4 The *delegates of Lebanon, Spain, Brazil, Argentina and Nigeria* supported that view.

5.5 The *delegate of France*, despite certain reservations also expressed his support.

The change proposed by the Mexican Administration was *approved*.

The Agenda for the first week of the Assembly was *approved* as amended.

6 Adoption of working hours

6.1 The following working hours were *adopted*:

09.30-12.30 hours

14.30-17.30 hours

7 Statements

7.1 The *Secretary-General of the Pan-African Telecommunication Union* (PATU) delivered the statement reproduced in Annex B.

7.2 The *Secretary-General of the Arab Telecommunication Union* (ATU) delivered the statement reproduced in Annex C.

7.3 The *Vice-Chairman of the International Telecommunication Users Group* (INTUG) delivered the statement reproduced in Annex D.

8 Publication of the new CCITT Book (Document AP VII-No. 95 and Temporary Document No. 13)

8.1 The *Director of the CCITT* drew attention to his recommendations concerning the CCITT Book contained in Section 4 of Document AP VII-No. 95 and to the proposals in Temporary Document No. 13. The proposal to produce the Book in smaller fascicles was still the subject of some discussion and several Administrations were somewhat reticent at the idea of a proliferation of the number of such fascicles. He therefore suggested the organization of a small Working Group to examine that proposal as well as the colour of the Book and the publication of the Study Group Questions as Contribution No. 1.

8.2 The *delegate of Spain* said that it should be made clear that the proposed Working Group would not restrict its attention to Document AP VII-No. 95 but would also consider any other relevant documents. He trusted that the suggestion to publish the Questions separately and to be made available for sale was not directed at Administrations.

8.3 The *Director of the CCITT* reassured the delegate of Spain that there was no suggestion that Administrations should pay for Contribution No. 1, which would be looked upon as a normal working document. It would, however, be offered for sale to any outsiders who were interested.

8.4 The *delegate of Austria* said that the choice of colour of the new Book did not require lengthy discussion and there did not appear to be any objection to the separate publication of the Questions. As to the proposal to produce the Book in smaller fascicles, it was true that account must be taken of users other than Administrations. While it might be advisable to have special volumes dealing with specific topics, it was also important that there should not be too many fascicles.

8.5 The *delegate of Italy* supported the setting up of a Working Group. The publication of Questions separately was only one of various possible solutions that should be examined. He also suggested that the system of parallel page numbering should be resumed.

8.6 The *delegate of France* also considered that the question of parallel pagination should be discussed.

8.7 The *Secretary-General* said that the decision to abandon parallel page numbering resulted from the desire of the Administrative Council to make certain economies. If it was now felt that the former system should be resumed, the matter would have to be referred back to the Administrative Council.

8.8 The *Deputy Secretary-General* said that the main issue was whether the Book was paid for out of the Publications Account or from the ordinary budget, and that depended on the extent to which entities outside Administrations purchased the Book. In the past the General Secretariat had tended to favour an increase in the number of volumes printed, but some guidance was now needed as to the form in which the Book was to be produced in future. In some cases, sales to Administrations seemed to have reached their peak and the publication of extra fascicles might not therefore produce increased revenue. There were, however, specific areas in which outside users were particularly interested and where a substantial increase in sales might be possible. He explained that parallel page numbering in all languages complicated the preparation process and tended to delay publication; the abandonment of that system in favour of paragraph numbering should not, in his view, pose any difficulty for users of the Book.

8.9 The *delegate of Japan* said that his delegation wished to suggest certain amendments affecting the denomination of the series of Volumes and hoped that those matters could be taken up by the Working Group proposed by the Director.

8.10 The *Chairman* thought it might be perhaps more appropriate to discuss that matter when the Reports of Study Groups I, II and III were examined. With regard to the specific mandate of the proposed Working Group, he felt that the colour of the new Book did not require further discussion. As to the question of parallel page numbering, it was perhaps not advisable at the present stage to go back on an Administrative Council directive, but the issue could be raised in the Working Group which would then report back to the Plenary on the various views expressed on the subject. On the other

hand, the proposal to produce the book in smaller fascicles and to publish Study Group Questions separately still had to be settled. He therefore suggested that the Working Group be set up with a specific mandate to re-examine Resolutions Nos. 4 and 5 (Annexes B and C to Document AP VII-No. 95).

It was so agreed.

8.11 The *Chairman* proposed that Mr. Grainson (Belgium) should act as Chairman of the Working Group. After consultation, he further suggested that the Working Group consist of the delegates of Argentina, Austria, Canada, France, the Federal Republic of Germany, Italy, Kuwait, Norway, Spain and the United Kingdom.

It was so agreed.

8.12 The *delegate of Brazil* said that his delegation still had some doubts regarding the costs involved, especially in the event of the publication of all Questions in a single volume. It was most important that before any final decision was taken, the implications of any charges on the ordinary budget be made quite clear. He hoped that the Working Group would report as fully as possible on the various options and indicate clearly the comparative costs so that the Plenary would be able to take a well-informed decision on the subject.

8.13 The *Chairman* said that the Working Group would be assisted by the General Secretariat in its analysis of costs. The Working Group would naturally also be assisted by the CCITT Secretariat.

8.14 The *delegate of Senegal* said that convenience of utilization was a factor which must be taken into account, particularly if developing countries were to be encouraged to participate more actively in the work of the CCITT. The use of modern techniques ought to enable printing and dissemination costs to be reduced; in that connection, the Working Group might usefully study ways and means of making a data bank available to countries in the future.

8.15 The *Deputy Secretary-General* said that all CCI texts were already stored in a bank in the ITU computer and word processing system. Once the general question of publications dissemination policy had been settled by the Administrative Council, it should be possible to make material available in forms other than conventional book forms and to achieve reductions in the related costs. However, it would be necessary to make provision in the Union's regular budget for certain tasks which were at present charged to the supplementary publications budget.

8.16 The *delegate of the Federal Republic of Germany* hoped that every effort would be made to avoid scheduling meetings of the Working Group concurrently with Plenary meetings.

8.17 The *Chairman* said that the Working Group would take into account the comments and suggestions made during the discussion.

9 Report by the Director on CCITT activities (Document AP VII-No. 71)

9.1 The *Director of the CCITT* introduced the report on the activity of the CCITT between the VIth and VIIth Plenary Assemblies (Document AP VII-No. 71), placing particular emphasis on the substantial increase in activities and the need to seek ways and means of enabling distant countries to participate more actively in the work of the CCITT.

9.2 The *delegate of the U.S.S.R.* said that commendable results had been achieved in implementing the programmes adopted by the VIth Plenary Assembly. The Recommendation and Study Programmes to be adopted by the current Assembly covered a great many fields and would certainly have an impact on the development of world telecommunications. His delegation considered that a cautious approach should be adopted to questions of organization and working methods and that structural changes should be introduced only in cases where careful analysis showed them to be absolutely essential.

He went on to outline the arrangements made by his Administration, in collaboration with telecommunication Administrations and information agencies all over the world and on the basis of standards developed by the ITU, to provide adequate telephone, telex and broadcasting facilities for the recent Olympic Games in Moscow. The U.S.S.R. Administration took the present opportunity of expressing its gratitude to all those who had contributed to the successful coverage of that important event.

9.3 Following comments by the *delegates of Spain, Lebanon and Senegal* on the action to be taken in respect of Document AP VII-No. 71, the *Chairman* suggested that the report might be approved provisionally, on the understanding that it would serve as a basis for the work of the four Committees, which might wish to make proposals in respect of some of the specific points it contained.

It was so agreed.

10 Report by the Director on the CCITT Secretariat (Document AP VII-No. 69)

10.1 The *Director of the CCITT* introduced the report in Document AP VII-No. 69. He drew particular attention to the problem of grading and career prospects for CCITT engineers, whose present situation could be described as highly unsatisfactory, and to the urgent need for an acceptable solution if the work of the CCITT was not to suffer. The recruitment of additional assistants and the introduction of a documents centralization system in the CCITT were also matters requiring priority attention.

10.2 The *delegate of the U.S.S.R.* said that his Administration recognized the CCITT's need for sufficient specialized staff to perform its work. However, the question had financial implications and therefore came within the purview of the Administrative Council.

10.3 The *delegate of Lebanon* agreed that it was for the Administrative Council to take policy decisions on such matters. However, there was no reason why the Plenary Assembly should not make recommendations to the Council. He therefore suggested that no decision should be taken at the present stage but that the matter should be taken up again towards the end of the Plenary Assembly, when the programme for the next study period had been drawn up.

10.4 The *delegate of France* agreed that the CCITT ought to draw the Administrative Council's attention to its staff and other requirements and supported the suggestion that a Recommendation be prepared on the matter.

10.5 The *delegate of Senegal* endorsed the comments by the previous speakers.

10.6 The *Chairman* said that if he heard no objection he would take it that delegations wished further consideration of the question to be deferred until the work to be performed by the CCITT over the coming four years had been more clearly defined, at which time requirements could be quantified and a Recommendation prepared for the Administrative Council.

It was so agreed.

The meeting rose at 18.10 hours.

ANNEX A

Statement by the Director of the CCITT concerning deceased delegates

"Mr. Chairman,

Since the last Plenary Assembly, a number of personalities participating in CCITT work have left us. A list of their names is given in Temporary Document No. 2 but a complete list will be published later should there be any to add.

Among those who have died, I should particularly like to mention two Directors of the CCIs, Mr. Valensi and Mr. Croze.

Mr. G. Valensi, who died in Paris in March 1980, was Director of the CCIF from its inception until 1956, when the CCITT was established, and he worked energetically for 22 years for the improvement of international telecommunications. In 1979, the ITU Administrative Council awarded him the first ITU Centenary Prize for his outstanding contribution to the development of international telecommunications.

Mr. R. Croze, Director of the CCITT during the period 1972-1976, left us on 28 May 1979. He gave new vitality to the CCITT making it the remarkable working tool it is today. His memory will live with all those who knew him and appreciated his great qualities.

We also mourn the death of Mr. Pritchett, Chairman of Study Group VI.

Only a few days ago we learned of the sudden death of Mr. Augusto Bigi, former Chairman of the World Plan Committee. Mr. A. Bigi collaborated in the work of the CCITT for many years and in 1971 presided over the group set up to reorganize the CCITT.

Mr. Chairman,

I would find it difficult here to talk of the merits of all those who have passed away. I should like, however, to pay tribute to the great services rendered to the CCITT by Mr. Van Den Berg of the Netherlands who, among other things, very successfully served as Chairman of the "Organization and working methods" Committee during the VIth Plenary Assembly.

I must also inform you of the death of Mr. Gustav Adolf Wettstein, former head of the Swiss Telecommunication Administration, during the current year.

Since 1930, when he joined the Berne telephone administration, he gave all his energies not only to the development of Swiss telecommunications but also to telecommunications on a world scale. He took part in many ITU meetings; in particular he was Chairman of the Plenipotentiary Conference in 1965 and also collaborated in various CCIT meetings.

In addition to his technical and specialized knowledge, he will be remembered for his quiet, thoughtful and conciliatory approach, his determination and his spirit of cooperation. He was greatly appreciated by all those who worked with him and was known as an exemplary chief. Many installations now set up in Swiss telecommunications owe their existence to his foresight and initiative.

Mr. Chairman, Ladies and Gentlemen, I propose that we should observe one minute's silence in tribute to the memory of the delegates who are no longer with us."

ANNEX B

**Statement by the Secretary-General of
the Pan-African Telecommunication Union (PATU)**

“Mr. Chairman,
Mr. Secretary-General of the ITU,
Mr. Director of the CCITT,
Mr. Director of the CCIR,
Distinguished delegates,
Ladies and Gentlemen,

In congratulating the Chairman on his outstanding election, we take particular pleasure in conveying to you the greetings of the African countries members of the Organization of African Unity (OAU) and of its specialized agency the Pan-African Telecommunication Union (PATU). We wish to express to you our warmest thanks for having invited us to the VIIth Plenary Assembly of the CCITT.

We welcome the trust that you have placed in the African delegates whom you elected to perform duties of the highest importance during this Plenary Assembly of the CCITT. There can be no doubt that they will fully carry out the responsibilities thus assumed.

Ladies and Gentlemen,

PATU is participating in the work of the CCITT for the first time. We are very glad to be doing so, since this gives us an opportunity to strengthen the cooperation that already exists between the ITU and PATU.

We want this cooperation to be dynamic and productive. Indeed, during our two and a half years of activity, we have already been able to take tangible measures with the assistance of the ITU. Our future activities, which will become more and more widespread, will call for intensified ITU aid. We believe that the CCITT, the CCIR and the IFRB, as specialized organs of the ITU, can help us to solve our problems, which must nevertheless be regarded as specific to our situation as developing countries and must be treated as such. Apart from the urgent problems of the harmonious development of our networks, we also have those of planning, training, maintenance, tariffs, scientific research and telecommunication industries. We should like to take this opportunity of expressing our great satisfaction with the work undertaken by the CCITT for the developing countries during the past study period.

For your information, after already having organized two seminars, one on the project for a regional telecommunication network via the African satellite AFROSAT and the second on maintenance, training and inter-state cooperation, PATU is hoping to organize, during the first quarter of 1981 and with the help of UNIDO, a seminar on the promotion and development of scientific research and telecommunication industries in Africa. In this connection, we are of course counting on contributions from the industrialized countries and from the ITU and its CCI's.

Ladies and Gentlemen,

By uniting our efforts, as we must do, in order to solve all these problems, we shall be contributing to the establishment of a new telecommunication order as a precursor of the new world information and economic order which is so ardently desired by all the peoples of our planet who yearn for peace, justice and progress.

We wish you every success in your work.”

ANNEX C

**Statement by the Secretary-General of
the Arab Telecommunication Union (ATU)**

“Mr. Chairman,
Mr. Director of the CCITT,
Mr. Director of the CCIR,
Mr. Secretary-General,
Ladies and Gentlemen,

I take pleasure in extending to you on behalf of the Arab Telecommunication Union my cordial congratulations on your election as the Chairman of this conference.

Mr. Chairman,

The ATU realizes the importance of cooperation with the CCITT and looks forward to strengthening the relations between CCITT and ATU.

I am firmly convinced that the CCITT has played a big role in the progress of telecommunications. During the next study period, we ask the CCITT to give close attention to the developing countries. The responsibilities which the ATU assumes will prompt us to cooperate with you. Finally I wish the conference every success in its work."

ANNEX D

**Statement by the Vice-Chairman of the
International Telecommunications Users Group (INTUG)
to the VIIth Plenary Assembly of the CCITT**

"Mr. Chairman,

It is a great honour to address this most distinguished body. In the short period of INTUG's membership we have learned to admire and respect the organisation of the CCITT and the diligence and dedication the delegates have applied to the work which preceded this Plenary Assembly. In the words of my predecessor Alex Tomberg at the first CCITT/INTUG seminar "we wish and intend to be good citizens of the CCITT". In echoing these sentiments I will, like a good citizen, be brief.

Many of you already know something of INTUG and its work and suffice it to say here that my organisation is primarily an association of telecommunications users with the task of representing their interests at the international level. INTUG believe that it is a basic right of people to communicate with one another and in principle will therefore support any measure which facilitates communication and oppose any measure which restricts it. In this very broad statement of policy the PTT administrations will recognise that INTUG's intentions have a strong affinity with their own but that we may not always agree on what exactly "facilitates" or what exactly "restricts". INTUG intends to play an active role at the CCITT from the beginning of the next study period and hopes that delegates will recognise the value of having direct access to user opinion in their debates. We ask them to bear in mind that INTUG aims to represent all users and does not and will not represent purely national or sectional interests. It is significant to note here that INTUG's experience is that telecommunications users share to a very great extent identical needs, concerns and opinions – whatever their nationality. INTUG will therefore be giving expression within the CCITT to a unified user opinion. It is hoped that this injection of a user element into the work of the CCITT will therefore be welcomed by administrations. Such an element may be seen as not only helpful but indeed vital to their common purpose of meeting the needs of telecommunications users throughout the world.

Although some Administrations may not agree with all our views, they can at least be assured that those views will be representative of telecommunications users and will be expressed in terms which are in keeping with the traditions of the CCITT.

Perhaps you will allow me Mr. Chairman to make one or two observations regarding the work on international telecommunications which takes place both inside and outside this chamber. INTUG's view of the CCITT is that its success has depended and will continue to depend to a very great extent on the freedom of expression so necessary to good debate. The need to communicate over international boundaries is so clearly vital in this troubled world that it should clearly override purely national or sectional interests. My organisation therefore views with concern a tendency for individuals and groups to come to the CCITT with already entrenched positions. Such a trend can only undermine the ability of the CCITT to negotiate agreements through the reconciliation of different views. INTUG feels that more flexibility and freedom of expression within the CCITT is necessary to its continuing strength and that all members have a responsibility in this respect. INTUG firmly believes that a healthy CCITT is the right forum for discussions on international telecommunications affairs and will be in opposition to moves from any quarter to weaken it.

The CCITT has already demonstrated its interest in users' views and the fact that this paper is being presented at all is evidence of this. However INTUG hope that in the future the unanimity of user opinion will be reflected more closely by the Administrations themselves. Greater sensitivity to national user views would, we suggest, lead to greater unity at the international level.

Mr. Chairman may I thank you and all the delegates for your kind attention. INTUG looks forward with pleasure but also with a deep sense of responsibility to contributing to the important work of the CCITT which lies ahead."

APPENDIX I

**List of delegates to CCITT meetings and CCITT officials
who have died since the VIth Plenary Assembly**

Mr. G. VALENSI	Former Director of the CCIF
Mr. R. CROZE	Former Director of the CCITT
Mr. J. PRITCHETT	United Kingdom – Chairman of Study Group VI
Mr. V. D'ANDREA	Italy (SIP) – Vice-Chairman of Study Group XVII
Mr. K. J. CHAPMAN	United Kingdom – Vice-Chairman of Study Group VII
Mr. U. HADLER	Germany (Federal Republic of) (SEL)
Mr. H. HABERL	Austria (Radio-Austria AG)
Mr. A. AERTS	Belgium
Mr. Ph. BEKAERT	Belgium
Mr. M. DEN HERTOOG	Belgium (ITT)
Mr. J. J. B. HILL	Canada (CTCA)
Mr. N. E. HOLMBLAD	Denmark
Mr. G. CANESTRARI	United States of America (ITT World Com.)
Mr. L. BANGOURA	Guinea (Rev. People's Rep. of)
Mr. A. BIGI	Italy
Mr. W. N. GITAU	Kenya
Mr. K. LAGSET	Norway
Mr. L. LARSEN	Norway
Mr. D. VAN DEN BERG	Netherlands
Mr. H. E. PRATTE	Philippines (Philippine Long Distance Telephone Company)
Mr. M. VAN HASSELT	United Kingdom
Mr. A. W. WILSON	United Kingdom
Mr. L. A. WILKINS	United Kingdom (Cable and Wireless)
Mr. G. A. WETTSTEIN	Switzerland
Mr. K. SIMIC	Yugoslavia

APPENDIX II

**List of delegates to CCITT meetings and CCITT officials whose retirement
has been announced since the VIth Plenary Assembly**

Mr. A. ZAIDAN	Saudi Arabia – Chairman of the Plan Committee for Asia and Oceania
Mr. A. Chr. JANSEN	Netherlands – Chairman of Study Group X
Mr. R. HUBBELL	United States (ATT) – Vice-Chairman of Study Group II
Mr. H. SHIMADA	Japan (NTT) – Vice-Chairman of Study Group XII
Mr. J. F. BAMPTON	United Kingdom – Chairman of Working Party IV/2
Mr. D. L. RICHARDS	United Kingdom – Special Rapporteur for the Laboratory Working Party
Mr. A. BECKWORTH	Australia
Mr. B. TILLEY	Australia
Mr. J. BOUCHER	Australia
Mr. S. DOSSING	Australia
Mr. I. MCRAE	Australia
Mr. K. VAVRA	Austria
Mr. E. HOYER	Austria
Mr. A. THEYS	Belgium
Mr. J. HENRY	Belgium
Mr. P. BOUCHIER	Belgium
Mr. F. VOSSEN	Belgium
Mr. H. H. ADELAAR	Belgium (ITT)
Mr. J. R. DUNN	Canada (Teleglobe)
Mr. L. F. SWAINE	Canada (CTCA)
Mr. N. NACHFOLGER	Canada (CTCA)
Mr. S. H. WHITAKER	Canada (BNR)
Mr. H. LAURSEN	Denmark
Mr. B. HAUSCHILDT	Denmark
Mr. P. JOERGENSEN	Denmark
Mr. P. LAURSEN	Denmark
Mr. O. B. GIBSON	United States (ATT)

Mr. S. LAJKO	Hungarian People's Republic (BUDAVOX)
Mr. L. FEI	Italy
Mr. HASSAN ABDUL WAHAB	Malaysia
Mr. NAH SECK WAH	Malaysia
Mr. J. J. BERNARD	Netherlands
Mr. C. F. GALJAARD	Netherlands
Mr. K. KOZŁOWSKI	Poland
Mr. W. ADASZEWSKI	Poland
Mr. J. DUNIN	Poland
Mr. W. WINOGRADOW	Poland
Mr. M. MAIA ATHAYDE	Portugal
Mr. J. FERNANDES BARROS	Portugal
Mr. H. P. V. CRUZ	Portugal
Mr. C. GOZALO E SILVA	Portugal
Mr. S. H. CHISMAN	United Kingdom
Mr. J. H. HAYTER	United Kingdom
Mr. M. B. WILLIAMS	United Kingdom
Mr. E. P. EADES	United Kingdom (Cable and Wireless)
Mr. L. J. HARRIS	United Kingdom (Cable and Wireless)
Mr. W. J. S. RAE	United Kingdom (Cable and Wireless)
Mr. W. A. D. TALBOT	United Kingdom (Cable and Wireless)
Mr. R. F. C. THOMAE	United Kingdom (Cable and Wireless)
Mr. A. A. WILLETT	United Kingdom (Cable and Wireless)
Mr. B. BJUREL	Sweden
Mr. J. VALOTTON	Switzerland
Mr. R. RÜTSCHI	Switzerland

CCITT Secretariat

Mr. D. J. DORMER	Senior Counsellor
Mr. A. WOLF	Chief, Administrative Division
Mr. R. HENRY	Technician (Laboratory)

SECOND PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Tuesday, 11 November 1980, at 09.30 hrs

Subjects discussed:

- 1 Report of the CMV
- 2 Protection of the names of CCITT defined public services
- 3 Report by the Director on the work of the Plan Committees
- 4 Report of Study Group XII
- 5 Draft Resolution
- 6 Designation of the time in international telecommunication activities

1 Report of the CMV and associated documents (Documents AP VII-No. 96, AP VII-No. 126, Temporary Documents Nos. 8, 20, 24 and 26/PLEN.)

1.1 The *Chairman of the CMV* (Mr. Thué, France) paid tribute to the late Mr. Villeneuve, former Chairman of the CMV whom he had succeeded in 1978. He then introduced Document AP VII-No. 96 which constituted the Report on the activities of the CMV, highlighting the main features of the Study Group's work during the study period.

He suggested that the parts of the Report relating to Telegraph and Telephony be withdrawn provisionally, and be considered under a separate item of the agenda, as those definitions were associated very closely with the mandate of the CCITT itself.

It was so agreed.

1.2 The *Chairman* thanked the Chairman of CMV for his introduction of the Report and invited the Assembly to review the Recommendations therein.

1.3 *Recommendation A.10 revised* (Terms and definitions)

1.3.1 The *Deputy Secretary-General* drew attention to Temporary Document No. 20/PLEN. which described, inter alia, the General Secretariat's efforts to produce specialized vocabulary lists, primarily for use by the ITU staff but conceivably of value also to Administrations, and which also recalled that the CCIR Plenary Assembly had already agreed that Part 2 of the List of Definitions of Essential Telecommunication Terms – envisaged in the late 1960s but never published – should be abandoned.

Recommendation A.10 revised was *adopted*.

1.4 *Draft new Recommendation A.IX* (Presentation of texts on terminology)

Adopted.

1.5 *Recommendation A.13 revised* (Collaboration with the IEC on graphical symbols and diagrams used in telecommunications)

1.5.1 The *delegate of Senegal* said that the development of symbols, diagrams, etc. had not kept pace with the evolution of telecommunication equipment and that steps should be taken to urge the CCI/IEC Joint Coordinating Group to recommend standardized definitions for the various elements of power installations.

1.5.2 The *representative of the CCIR* said that some years ago the IEC had been requested to draft a chapter on power sources; clearly it should now be completed in the light of up-to-date techniques.

1.5.3 The *Chairman of the CMV* took note of the point raised by the delegate of Senegal and said he would look into the exact terms which the Group should be asked to study.

Recommendation A.13 revised was *adopted*.

1.6 *Recommendation A.14* (Publication of definitions)

Adopted.

1.7 *Recommendation B.10 revised* (Graphical symbols and rules for preparation of diagrams in telecommunications)

Adopted.

1.8 *Recommendation B.1 revised* (Letter symbols for telecommunications)

Adopted.

1.9 *Recommendation B.3 revised* (Use of the international system of units [SI])

Adopted.

1.10 *New Recommendation BX* (Logarithmic quantities and units)

Adopted.

1.11 The *Chairman* referred the Assembly to Temporary Documents Nos. 8 and 24/PLEN. and Document AP VII-No. 126, all of which contained information useful to Committee A, and suggested that they be forwarded to that Committee for consideration.

It was so *agreed* and the proposal in Temporary Document No. 26/PLEN. was thus dropped.

The *Chairman* said that although vocabulary work was properly conducted in small groups, the coordinating role of the CMV was vital and he thanked Mr. Thué for his excellent work.

2 **Protection of the names of CCITT defined public services** (Document AP VII-No. 42)

2.1 The *Director of the CCITT* introduced Document AP VII-No. 42, adding that the subject of the names "Teletex", "Telefax" and "Bureaufax" had been discussed in depth with the Legal Adviser of the ITU, in collaboration with the World Intellectual Property Organization.

2.2 The draft Resolution contained in the document was endorsed by the *delegates of China, the U.S.S.R., Brazil, Nigeria and Italy* in view of the rapid evolution of the three services and the fact that further delay in adopting standard names would only increase confusion.

2.3 The *delegate of Canada* pointed out that adoption of the Resolution at the present stage would result in problems for various national Administrations; in the case of Canada and in Australia, for example, where the name "Teletex" had been registered by Bell Canada and Siemens, respectively.

2.4 The *delegate of the Federal Republic of Germany* said that the manufacturer in question had stated its readiness to release the name to all Administrations and RPOAs who wished to use the name for the introduction of the CCITT-standardized service.

2.5 The *delegate of Australia* confirmed that statement. A decision had not yet been taken on the application for registration of the name "Teletex" and the Administration had received the intimation that Siemens would be prepared to withdraw the name if the CCITT were to adopt the term. He strongly supported the Resolution.

2.6 The *delegate of the United Kingdom* said he had every sympathy with the proposal and did not wish to object to it. However, he wished to place on record that the name "Telefax" had been registered in the United Kingdom since 1945 as a trademark of Creed & Co. (now part of ITT).

2.7 The *Director of the CCIR* drew attention to the existence of a closely related term "Teletext" which was in wide use for a broadcast still image and data service. Presumably any action taken by the CCITT Plenary Assembly would not prejudice the future use of that term, which was considered by the CCIR as provisional for the moment.

2.8 The *Chairman of Study Group I* supported the Resolution, but noted that the terms in question had not yet been adopted definitively by the CCITT either.

The Resolution (Protection of the common names of CCITT defined international public services) was *adopted*.

3 Report by the Director on the work of the Plan Committees (Documents AP VII-Nos. 28, 29 and 30)

3.1 The *Director of the CCITT* introduced Document AP VII-No. 28, supplemented by Documents AP VII-Nos. 29 and 30 which constituted the Report on the work of the Plan Committees.

Part A reviewed in some detail the meetings of the Regional and World Plan Committees. Part B concerned the future activities of the Plan Committees, decisions taken at the World Plan Committee meeting held earlier in 1980 and suggestions for future activities. Technical assistance aspects were touched upon in the Report but would be considered in Committee D. The Report terminated with Resolutions issued by the Regional Committees and a slightly amended version of Resolution No. 12, which the Assembly was called upon to adopt.

In conclusion, he thanked the Chairmen and Vice-Chairmen of the World and Regional Plan Committees, the Special Rapporteurs and all those who had contributed to the success of the meetings.

3.2 The *Chairman of the World Plan Committee*, delegate of Lebanon, presented through the Chairman his sincere condolences to the Italian delegation on the recent death of Mr. Bigi, a former Chairman of the World Plan Committee. He expressed his appreciation to the Director of the CCITT and the Councillor responsible for the Plan Committees, to the Secretariat and all the participants who had collaborated so fruitfully. His particularly warm thanks were due to the French Administration for its generous hospitality on the occasion of the World Plan Committee meeting in Paris.

Speaking as the delegate of Lebanon, he requested the CCITT Secretariat to take into account, in List No. 4, "Interregional telephone-type submarine cables, existing, being or to be provided", in Part I of the General Plan for the development of the interregional telecommunication network, the delayed contributions of the Lebanese Administration submitted to two recent meetings, that of the Regional Plan Committee for Europe and the Mediterranean Basin held in Santiago de Compostela and that of the World Plan Committee held in Paris, relating in particular to the study of a new submarine cable between Lebanon and France (Lebanon - France II) with a capacity of 1200 channels and to be brought into service in 1982-1983. In addition, four new international electronic switching centres had been installed in the city of Beirut.

3.3 The *delegate of France* supported the Lebanese delegate's remarks concerning the studies for a new submarine cable (Lebanon-France II) with a capacity of 1200 channels.

3.4 The *Director of the CCITT* asked the delegate of Lebanon to communicate to the Secretariat the additions to be incorporated in the World Plan Book.

3.5 The *Chairman of the Plan Committee for Africa*, delegate of Senegal, thanked the Director of the CCITT for his report and for the results obtained at the Regional and World Plan Committee meetings. He insisted once more on the substance of Resolution No. 1 AF (Abidjan) and asked what the CCITT's intentions were with respect to the re-activation of the TAF Group which had not met during the past study period but which was of capital importance.

3.6 In reply the *Director of the CCITT* congratulated the Chairman of the Africa Plan Committee for the work accomplished and said that the CCITT was prepared to organize a meeting of the Tariff Group for Africa at any time, provided the agenda was substantial enough to warrant a meeting.

3.7 The *Chairman* said that that point could be taken up at the meeting of Study Group Chairmen and Vice-Chairmen which would follow the Plenary Assembly.

3.8 Resolution No. 12 (Plan Committees) was *adopted*.

3.9 The Assembly *took note* of Document AP VII-No. 29 (Allocation of telephone country codes and telex destination codes).

3.10 The *Chairman* said that the success of the Plan Committees depended not only on the active participation of delegates but on the skill and energies of their Chairmen and on behalf of the Plenary Assembly he thanked the officers of all the Plan Committees for their efforts.

4 **Report of Study Group XII** (Documents AP VII-Nos. 50, 51, 53, 112, 115; Temporary Document No. 14/PLEN.)

4.1 The *Chairman of Study Group XII* (Mr. Andrews, United States of America) first introduced the amendments to Recommendations and new Recommendations in Series P for inclusion in Volume V of the *Yellow Book* (Document AP VII-No. 51), drawing special attention to the new Recommendations.

The supplements set out in Document AP VII-No. 53 were intended to provide Administrations with information on how others were dealing with transmission planning; special attention should be paid to the models supplied by the United Kingdom Administration and the ATT.

Turning to the final report of Study Group XII (Document AP VII-No. 115), he said that the Study Group's future work would be concentrated on three major themes: first, completion of the transition to objective loudness ratings; secondly, further development of computer models, perhaps resulting in a Recommendation based on Recommendation P.11; and thirdly, performance assessment of new network technology.

4.2 The *Director of the CCITT* said that Temporary Document No. 14/PLEN. contained a number of errors and suggested that it should be cancelled.

It was so decided.

Document AP VII-No. 51

4.3 *Draft new Recommendation P.11* (Effect of transmission impairments)

Adopted.

4.4 *Draft new Recommendation P.34* (Sensitivities of loudspeaker telephones)

Adopted.

4.5 *Draft new Recommendation P.74* (Methods for subjective determination of transmission quality)

Adopted.

4.6 *Draft new Recommendation P.78* (Subjective testing method for determination of loudness ratings in accordance with Recommendation P.76)

Adopted.

4.7 *Draft new Recommendation P.79* (Calculation of loudness ratings)

Adopted.

4.8 *Amendments to other Series P Recommendations*

Adopted.

Document AP VII-No. 112

4.9 *Draft new Recommendation P.10* (Vocabulary of terms on telephone transmission quality and telephone sets)

Adopted.

Document AP VII-No. 53

4.10 *Supplement No. 2* (Methods used for assessing telephony transmission performance)

Supplement No. 3 (Transmission rating models)

Supplement No. 4 (Prediction of transmission qualities from objective measurements)

Supplement No. 5 (The Sibyl method of subjective testing)

Supplement No. 6 (Attenuation of the electro-acoustic efficiency of telephone sets in view of protection against acoustic shocks)

Adopted.

4.11 *Documents AP VII-Nos. 50 and 115*

Approved.

The *Chairman* congratulated Study Group XII and its Chairman on the efficient way in which they had performed a very large volume of complex and difficult work.

5 **Draft Resolution** (Document AP VII-No. 34)

5.1 The *Chairman of Study Group XII* said that, whereas the responsibilities of the CCITT Laboratory had been established by common practice, Study Group XII had decided unanimously that the time had come to set out a charter for the Laboratory, to be included as a Resolution in the *Yellow Book*. He introduced the draft Resolution in Document AP VII-No. 34.

5.2 The *Deputy Secretary-General* said that it might be desirable to introduce some purely editorial changes in the draft Resolution, in order to avoid difficulties with the Administrative Council. In the first place, the words "Staff and related" should be inserted before "expenses" at the beginning of § 5.1, to make it clear that Laboratory equipment was paid for from the Reserve Fund, a separate account of the Union which did not affect the contributory unit. Secondly, the reference to the Laboratory as an "organ" of the CCITT in the second line of § 1.1 was inaccurate, since the word "organ" had a special meaning in the Convention, which set out the organs comprising the Union – the Plenipotentiary Conference, administrative conferences and the four permanent organs – and defined the structure of the CCITT – the Plenary Assembly, the Study Groups and the Secretariat. He therefore suggested that the word "organ" in § 1.1 be replaced by some such term as "section" or "element". Thirdly, the heading at the top of page 2 ran the risk of creating confusion with the Administrative Regulations of the Union, which were in fact treaty obligations entered into between Member countries; the title should be changed to make it clear that the internal rules of the Laboratory were meant. All those points should be elucidated before the draft was adopted as a formal text of the Plenary Assembly.

5.3 The *delegate of the United Kingdom* said that his delegation had noted a number of points requiring editorial changes, as well as one point of substance: since the operators for subjective measurements also acted as technicians, it would be advisable to amalgamate the second and third indents of § 3.1. His delegation could support the Deputy Secretary-General's suggestions and was prepared to cooperate with him in revising the draft.

5.4 The *delegate of the U.S.S.R.* said that his delegation could support the draft Resolution, on the understanding that any questions of increasing expenditure on the Laboratory would be considered in the Administrative Council.

5.5 The *delegate of the Federal Republic of Germany* said that, although it was clearly desirable to set out the objectives and conditions of the work of the Laboratory, it might be preferable not to do so in a formal Resolution which would have to remain unchanged until the next Plenary Assembly. He suggested that the Assembly should merely take note of the rules as amended by the Deputy Secretary-General and the United Kingdom delegation, leaving their application and possible adaptation to the Director of the CCITT in consultation with Study Group XII.

5.6 The *delegate of Lebanon* and the *Director of the CCITT* supported that suggestion.

The Assembly *approved* the suggestion of the delegate of the Federal Republic of Germany, on the understanding that the amended text would not be submitted to a later plenary meeting.

6 Designation of the time in international telecommunication activities (Temporary Document No. 10/PLEN.)

6.1 The *Director of the CCIR* said that UTC was the time scale now used by all standard time and frequency stations and was recognized by other scientific organizations. Its main benefit was its capacity for synchronizing the timing of events in remote parts of the world with an uncertainty of less than one microsecond, basically because it was derived from an atomic clock, much more stable than the astronomical time bases which were derived from the rotation of the earth and could depart from the time standard by as much as one second. WARC-79 had considered it important to make the change because of its use in many radio applications, such as tracking, as an accurate time base for remote areas and for high speed digital systems. The paper in question had been submitted to the Assembly for information, in case it might decide to adopt a Resolution substituting UTC for other time scales in CCITT documentation.

6.2 The *Deputy Secretary-General* agreed that it might be useful to adopt a Resolution on the subject, since despite the Recommendation of WARC-79, there was a whole body of information exchanged between ITU Headquarters and Members of the Union, through the IFRB, on matters concerning coordination and planning of the radio frequency spectrum and in connection with the operational data received, published and treated by the General Secretariat, where the GMT time base was still used. An outstanding example was that of the Resolutions adopted by administrative telegraph and telephone conferences over the years. The Plenary Assembly had been given some flexibility for updating the provisions of Resolutions Nos. 1 and 2 of the 1973 Telegraph and Telephone Conference, which were appended to the Telegraph and Telephone Regulations. He suggested that he should draft a Resolution based on the Annex to Temporary Document No. 10/PLEN., giving the Secretary-General the necessary authority gradually to introduce UTC into all the service documents dealing with telegraph and telephone public correspondence published in the Union.

6.3 The *delegate of Spain* supported the Deputy Secretary-General's suggestion.

6.4 In reply to the *delegate of Norway*, the *Director of the CCIR* explained that the term "official documents" had been used to indicate that the documents issued by the ITU would use UTC to designate the time, whereas other time scales might continue to be used in input documents received in the Union from various sources.

It was *decided* that the Deputy Secretary-General should draft a Resolution on the use of the term UTC.

The meeting rose at 12.30 hours.

THIRD PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Wednesday, 12 November 1980, at 09.40 hrs*Subjects discussed:*

- 1 Statement by the Director of Telecommunications of the Italian PTT Administration
- 2 Report of Study Group IV
- 3 Report of Study Group V
- 4 Report of Study Group VI
- 5 Report of Joint Working Party LTG
- 6 Report of Study Group XV
- 7 Draft amendments to Resolution No. 8
- 8 Report of the CMTT

1 Statement by the Director of Telecommunications of the Italian PTT Administration

- 1.1 The *Director of Telecommunications of the Italian PTT Administration*, made the following statement:

"Mr. Chairman,
Mr. Secretary-General,
Mr. Deputy Secretary-General,
Directors of the Consultative Committees,
Ladies and Gentlemen,

I thank you for making this exception in allowing me to participate in your meeting.

I have been instructed by the Minister of Posts and Telecommunications of Italy, Mr. Michele Di Giesi, to convey his gratitude to you for having elected Mr. Gagliardi to preside over your Plenary Assembly.

Mr. Gagliardi enjoys the full confidence and appreciation of my Administration. I am sure that, with your assistance, he will be able to direct the work of this Assembly so as to achieve results which will be most favourable for the development of international telecommunications.

Thank you, Mr. Chairman."

The *Chairman* also expressed his thanks on behalf of the Assembly.

2 Report of Study Group IV (Documents AP VII-Nos. 13, 14, 15)

2.1 The *Chairman of Study Group IV* (Mr. Kiil, Denmark), introducing the documents, explained that new and fully revised Recommendations in Series A, M and N appeared in Document AP VII-No. 14 and new and fully revised Recommendations in Series O were given in Document AP VII-No. 15. Part III of Document AP VII-No. 13 contained minor amendments proposed to the Recommendations in Series M, N and O of Volume IV of the *Orange Book*. Since the work of Study Group IV depended largely on that of other Study Groups, especially those working on new systems, special attention should be paid to draft new Recommendation A (Collaboration concerning maintenance considerations for new systems), which was of interest to nearly all CCITT Study Groups.

- 2.2 *Amendments proposed to the Recommendations of Volume IV*

Adopted.

- 2.3 *Draft new Recommendation A*

Adopted.

- 2.4 *Draft new Recommendations in Series M*

2.4.1 The *representative of the CCIR* observed that some of the terminology used in Recommendation M.1100 did not correspond to the definitions adopted by WARC-79 and might be misleading, particularly since some other CCITT Study Groups, such as Study Group X, had aligned their terminology on that of WARC-79.

2.4.2 After a brief discussion, the *Chairman* proposed that the terms in the draft new Recommendations should not be changed, but that footnotes should be inserted as necessary to the effect that different terms had been adopted by WARC-79. That procedure should apply to the texts of all CCITT Study Groups.

It was so *decided*.

The draft new Recommendations in Series M were *adopted* on that understanding.

2.5 *Fully revised Recommendations in Series M*

Adopted.

2.6 *Fully revised Recommendations in Series N*

Adopted.

2.6.1 In response to a suggestion by the *delegate of Italy*, the *Chairman of Study Group IV* said he agreed that the Joint CCITT/CCIR Working Party on sound-programme and television circuits should be re-established to provide a forum for exchanges of views during the forthcoming study period.

2.7 *Draft new Recommendation in Series O*

Adopted.

2.8 *Fully revised Recommendations in Series O*

Adopted.

2.9 The *Chairman* thanked Study Group IV through its *Chairman* for the efficient and voluminous work accomplished during the past study period.

3 **Report of Study Group V** (Document AP VII-No. 118)

3.1 The *Chairman of Study Group V* (Mr. Gratta, Italy), introducing the report, explained that the nature of the Study Group's work necessitated close cooperation with specialized outside international bodies such as CIGRE and the UIC and was not conducive to a large number of Recommendations – indeed, there were only 19 in Series K. He drew special attention to fully revised Recommendation K.11 and draft new Recommendations K.18 and K.19 and also to the proposal in § 11.2.2 of the report that the currently informal UIC/CCITT Working Group should be given a formal status: the four years' experience of that Group had shown that recognition of its official status by the CCITT would enable it to obtain information more easily.

3.2 *Fully revised Recommendation K.11* (Protection against overvoltages)

Adopted.

3.3 *Draft new Recommendation K.19* (Joint use of trenches and tunnels for telecommunication and power cables)

Adopted.

3.4 *Draft new Recommendation K.18* (Calculation of voltage induced into telecommunication lines from radio station broadcasts and methods of reducing interference)

Adopted.

3.5 *Amendments proposed to other Series K Recommendations*

Adopted.

3.6 The *Chairman* invited the Assembly to consider the proposal to give a formal status to the Joint UIC/CCITT Working Group.

3.6.1 The *delegate of Canada* said that, before a decision was taken in the Plenary Meeting, Committee A should be asked to take the matter into account in its discussions of Study Group structures during the forthcoming period.

3.6.2 The *delegate of France* pointed out that the question also fell within the terms of reference of Committee B.

3.6.3 The *Chairman* proposed that the problem be referred to Committee A with the indication that the Plenary Meeting had no objection to the formalization of the Joint Working Party. If Committee A decided to give the Working Party a formal status, the *Chairman* of Study Group V would prepare draft terms of reference for the group to be considered by Committee B.

It was so *decided*.

3.6.4 The *delegate of Senegal* said that in his country a national standardization committee which covered all services concerned with scientific and technical research was proposing to study the joint use of telephone poles by telecommunication and electric power enterprises with a view to economy. For a more thorough study of the relevant protection problems, the Joint Working Group might be expanded to comprise the IEC, which was studying the question.

3.6.5 The *Chairman* said that, to the best of his understanding, an increase in the number of Joint Working Groups which were not strictly necessary to study specific themes was not useful. On the other hand, he pointed out that the external bodies interested were already represented in Study Group V.

3.6.6 The *Chairman of Study Group V* endorsed that remark.

3.7 The *delegate of Senegal* asked whether the monographs and handbooks relating to protection against lightning were regularly updated to take all new protection methods into account.

3.7.1 The *Chairman of Study Group V* replied that Question 22/V, which was to be continued, fully provided for all the necessary updating of the handbook "Protection of telecommunication lines and equipment against lightning discharges". Other Questions relating to the protection of lines from overvoltage took protection against lightning into account.

3.7.2 The *Deputy Secretary-General* pointed out that in its Resolution CF, WARC-79 had focused attention on the need to provide Administrations, especially those of developing countries, with adequate information on protection against lightning, not only for conventional line equipment, but also for radio systems. Perhaps Committee B could be asked to examine the possibility of expanding the appropriate Study Group V Questions in the light of that WARC Resolution and to respond to the question of the delegate of Senegal.

3.7.3 The *Chairman of Study Group V* drew attention to § 6 of Part I of the report, which made it clear that joint CCITT/CCIR studies on protection against lightning were already in progress.

3.7.4 The *Chairman of CCIR Study Group 3* said that his Group had approved a Question in response to WARC Resolution CF and had identified another source of deterioration of equipment, auroral effects, which were not as serious as lightning but were still appreciable in certain parts of the world. In that connection, Study Group 3 was looking forward to cooperating with Study Group V in the study of Question 3/V.

3.7.5 The *Chairman of CCIR Study Group 10* said that his Group had also approved a new Question on the protection of radio equipment against lightning and would like it to be considered in conjunction with new draft Question Z/V on disturbances to telecommunication networks due to geomagnetic storms.

3.7.6 The *representative of the CCIR* said that CCIR Study Group 9 also wished to undertake the joint study of certain problems with CCITT Study Group V.

3.7.7 After a brief discussion, the *Chairman* proposed that the Chairmen of CCITT Study Group V and CCIR Study Groups 3, 9 and 10 should consult together in order to achieve better coordination and report on the subject directly to Committee B.

It was so *decided*.

Document AP VII-No. 118 was *approved*.

3.8 The *Chairman* congratulated the Chairman and all the members of Study Group V on the valuable work carried out during the past four years.

4 Report of Study Group VI (Documents AP VII-Nos. 36 and 122)

4.1 The *Deputy Chairman of Study Group VI* (Mr. Nikolsky, U.S.S.R.) paid tribute to Mr. Pritchett, who had been elected Chairman in 1976 and had died shortly after the last meeting of the Study Group in February 1980, as well as to his extremely active and effective contribution to the work of the Study Group.

Of the 14 Questions examined by Study Group VI during the latest study period, only one had already been completed, examination of eight Questions would continue on the same basis as before, while five further Questions would be examined on a modified basis. A draft handbook had been prepared on the jointing of telecommunication cable conductors, and several chapters of Recommendations concerning the construction, installation and protection of telecommunication cables in public networks had been completed and expanded. A very interesting exhibition on cable jointing techniques had been organized during the Study Group's final meeting.

Although the Study Group had carried out very useful and important work in the past study period, fewer contributions had been submitted than in previous periods: more active participation of Administrations, recognized private operating agencies and international organizations members of the CCITT would therefore be essential in the next study period to enable Study Group VI to deal with the problems assigned to it.

4.2 The draft text of the handbook on the jointing of telecommunication cable conductors (Document AP VII-No. 122) was *adopted*.

4.3 The texts for inclusion in the Recommendations on the construction, installation and protection of telecommunication cables in public networks (Document AP VII-No. 36) were *adopted*.

4.4 The report of Study Group VI was *adopted* in its entirety.

4.5 The *Chairman* thanked the Deputy Chairman of the Study Group and all its members for the excellent work they had accomplished.

5 Report of Joint Working Party LTG (Document AP VII-No. 3)

5.1 The *Chairman of Joint Working Party LTG* (Mr. Guillet, France) presented the Joint Working Party's report. The Working Party had actively collaborated with other Study Groups on Question 27/XV concerning signal power over the band in a telegraph-type circuit and proposed the revision of several Recommendations (H.51, H.41 and H.43), advocating in most cases a permitted signal power level of -13 dBm0 over a period of one minute.

5.2 The *representative of the International Press Telecommunications Committee* (IPTC) said that at the meeting of Joint Working Party LTG, he had asked whether tests should not be carried out, before lowering the permitted power signal level to -13 dBm0, in order to ensure that the reduction would not impair the quality of the transmitted image. The IPTC was quite willing to participate in such tests, since that was a field in which the press was becoming increasingly interested.

5.3 The *Chairman of Joint Working Party LTG* replied that it would pursue its study of Question 27/XV in the coming period and would of course consider any contributions which might be submitted on that particular point. If it were necessary to amend the proposals in question, the Working Party would do so.

5.4 The amendments and additions proposed to the Series H Recommendations (Document AP VII-No. 3) were *adopted*.

5.5 The report of Joint Working Party LTG was *adopted* in its entirety.

5.6 The *Chairman* expressed thanks on behalf of the Plenary Assembly to the Chairman of the Study Group and to all its members for the thoroughness with which they had accomplished their task.

6 Report of Study Group XV (Documents AP VII-Nos. 4, 73, 74, 75)

6.1 The *Vice Chairman of Study Group XV* (Mr. Souli r, France), presented the report of Study Group XV, explaining that Document AP VII-No. 73 described the general organization of the Study Group's work, Document AP VII-No. 4 contained draft Series J Recommendations relating to sound and television programme transmissions, Document AP VII-No. 74 contained amendments proposed to about forty current Series G Recommendations in Volume III of the *Orange Book*, while Document AP VII-No. 75 contained proposed texts for the new Series G Recommendations.

6.2 The draft Series J Recommendations were *adopted*.

6.3 The proposed amendments to current Series G Recommendations were *adopted*.

6.4 The proposed texts for new Series G Recommendations were *adopted*.

6.5 The proposed deletions of some Recommendations in Volume III of the *Orange Book* (Document AP VII-No. 73, p. 35) were *adopted*.

6.6 The report of Study Group XV was *adopted* in its entirety.

6.7 The *Director of the CCITT* thanked the Vice Chairman and all members of the Study Group for the effort they had put into the work and congratulated them on their efficiency.

7 Draft amendments to Resolution No. 8 (Document AP VII-No. 35)

7.1 The *Vice-Chairman of Study Group XV* recalled that Resolution No. 8, which had been elaborated by the Plenary Assembly of 1960, embodied a long-standing cooperation with the IEC and in particular with its Technical Committee 46. The amendments proposed were designed to include optical fibres and cables, not covered so far, and to make clear the respective competences of the CCITT and the IEC.

Resolution No. 8, as amended, was *adopted*.

7.2 The *Director of the CCITT*, on behalf of the Plenary Assembly, thanked the Chairman of the Assembly for his outstanding work as Chairman of Study Group XV.

8 Report of the CMTT (Temporary Document No. 19/PLEN.)

8.1 The *Vice-Chairman of the CMTT* (Mr. Simpson, United Kingdom) introduced the above report in the absence of Professor Angel, Chairman of the CMTT. It represented a summary of the results of the Interim Meeting of the CMTT which had taken place a month earlier, and the full report would be transmitted in the usual way from the Director of the CCIR through the Director of the CCITT to the CCITT Study Groups concerned.

He drew attention to points of particular interest to the CCITT, including CCIR Recommendation 567 on the transmission performance of television circuits (just approved as CCITT Recommendation J.61) and CCIR Report 646 which the CMTT had revised substantially.

8.2 The *Vice-Chairman of the CMTT* also informed the Assembly that an Interim Working Party (under his chairmanship) had been set up under Decision 18-2 of the CCIR to coordinate the work of CCIR Study Groups 10 and 11 and the CMTT with the CCITT.

In reply to the *delegate of Algeria*, who wondered what purpose was served by the new coordinating group since the CMTT already comprised experts from both CCIs, he said that its purpose was to coordinate the activities of the Study Groups mentioned in areas where there were common problems concerned with the use of digital techniques. It was necessary to make clear which Study Group should place the most emphasis on a particular aspect. As a means of coordination the Interim Working Party had already proved not only useful but efficient, as its meetings were arranged during the simultaneous meetings of CCIR Study Groups 10, 11 and the CMTT. Some changes to the Decision might be required as a result of changes in the responsibilities of CCITT Study Groups and he would circulate a draft proposal to that effect to the CCITT Study Group Chairmen concerned.

8.3 There were no Recommendations emanating from the CMTT which required the approval of the Plenary Assembly.

8.4 The report of the CMTT was *adopted*.

8.5 The *Chairman* thanked Mr. Simpson for his exposé and expressed his appreciation for the difficult task of coordination carried out by the CMTT.

The meeting rose at 12.45 hours.

FOURTH PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Thursday, 13 November 1980, at 09.40 hrs

Subjects discussed:

- 1 Report of Study Group II
- 2 Report of Study Group III
- 3 Report of Joint Working Party SMM
- 4 Report of Working Party "Book of the CCITT"
- 5 Report of Study Group XIV

1 Report of Study Group II (Documents AP VII-Nos. 60, 61, 62)

1.1 The *Chairman of Study Group II* (Mr. Biot, Belgium) paid tribute to the previous Chairman of the Study Group, Mr. Rüttschi, Switzerland, who had retired. Since the VIth Plenary Assembly, the workload of Study Group II had been substantially increased by the addition of several Questions that had previously been dealt with by Study Group XIII. Introducing the documents, he described briefly the work of the Study Group and the progress made by its four Working Parties on the various Questions assigned to them. Joint Working Party SMM had collaborated closely on certain Questions with which it was concerned.

1.2 Parts I and II of the Report (Document AP VII-No. 60)

1.2.1 The *Chairman* drew the Assembly's attention to the proposal that Recommendations E.501 and E.542 and Supplement No. 3 be deleted (Part I, § 5.2).

It was so *agreed*.

Parts I and II were *adopted*.

1.3 Part III of the Report (Document AP VII-No. 61)

1.3.1 *Section A: Draft revisions of existing Recommendations and proposed amendments to existing Recommendations Adopted.*

1.3.2 *Section B: Draft new Recommendations Adopted.*

1.4 Part IV of the Report (Document AP VII-No. 62)

1.4.1 *Section 1: Proposed amendments to existing Supplements Adopted.*

1.4.2 *Section 2: Draft new Supplements Adopted.*

1.5 The *delegate of Lebanon* noted that little progress had been made in the review of the world routing plan (Question 13/II) and expressed the hope that the Study Group would be able to reach constructive conclusions before the next Plenary Assembly.

1.6 The *Chairman of Study Group II* said it had become apparent in the course of discussions that an entirely new approach was needed to the subject. There seemed to be a growing feeling that routing procedures should themselves evolve, rather than adhere to a rigid plan, if they were to remain properly applicable, and it was hoped that the Study Group would be able to make rapid progress in that direction.

1.7 The *Chairman* thanked the Chairman and all the members of the Study Group for their valuable work.

2 Report of Study Group III (Documents AP VII-Nos. 64 + Corr., 65, 66, 68)

2.1 The *Chairman of Study Group III* (Mr. Kojima, Japan) outlined the salient points of Document AP VII-No. 64. Because Administrations and RPOAs all had their own economic, financial and political preoccupations, it had not always been easy in the course of the Study Group's work to agree on the various subjects with it had been concerned. Thanks to the wisdom and cooperation of all the members, however, some valuable results had been achieved. He thanked the Director of the CCITT for his unfailing assistance throughout the study period. He also thanked the Vice-Chairmen of the Study Group, the Chairmen of the Working Parties, the Secretariat officials concerned, as well as the Chairmen and members of other Study Groups for all the help they had volunteered.

2.2 *Parts I and II of the Report* (Document AP VII-No. 64)

Adopted.

2.3 *Part III of the Report* (Document AP VII-No. 65)

2.3.1 *Section A: Draft revisions of existing Recommendations*

Adopted.

2.3.2 *Section B: Draft new Recommendations*

2.3.2.1 The *representative of the Society for Worldwide Interbank Financial Telecommunications S.C. (SWIFT)* made the statement relating to draft Recommendation D.6 reproduced in Annex A.

2.3.2.2 The *representative of the International Press Telecommunications Council (IPTC)* made the statement relating to draft Recommendation D.6 reproduced in Annex B.

2.3.2.3 The *Deputy Secretary-General*, replying to the two previous speakers, outlined the action taken by the ITU together with the United Nations and certain of its specialized agencies, in particular UNESCO, in the field of telecommunications infrastructure and tariffs. As far as tariffs proper were concerned, the Union intended to cooperate fully with UNESCO in connection with the implementation of Recommendation No. 15 of the Intergovernmental Conference on Communication Policies in Asia and Oceania held at Kuala Lumpur in 1979, and would also continue to assist in the development of communications infrastructure on the African continent. He drew attention to the fact that a UNESCO Resolution calling upon Member States to give special attention to the establishment of more equitable telecommunication tariffs had been adopted by the UNESCO General Conference held recently at Belgrade. That Resolution called upon decisions to be taken at national levels in the exercise of sovereignty and the ITU would also join in project activity with the UNESCO Secretariat in other Regions. Finally, General Secretariat Circular-letter No. 370 of 27 August 1980 concerning the Intergovernmental Conference for Cooperation on Activities, Needs and Programmes for Communication Development (Paris, April 1980) and the ITU's contribution to the debate on communication matters at the UNESCO General Conference would be circulated to delegations for information (Document INF-No. 4).

2.3.2.4 The *delegates of Brazil, Switzerland and the United States* supported draft Recommendation D.6, which had been approved unanimously at the final meeting of Study Group III.

2.3.2.5 The *delegate of Australia* also supported the draft Recommendation. It should be borne in mind that Administrations themselves were the legitimate representatives of all categories of users, from whom they derived their mandate through the parliamentary process. The positions adopted by Administrations in ITU affairs were a synthesis of the views of all users in their respective countries and constituted a compromise that was as fair as possible. The needs and desires of organizations such as SWIFT were therefore taken into account by Administrations together with the requirements of other users.

2.3.2.6 The *Chairman of Study Group III* observed that draft Recommendation D.6 represented a compromise that had been reached after lengthy discussions. Study Group III was, and would continue to be, attentive to the views expressed by users and customers which was necessary for the continued re-examination of the D series of Recommendations, and it would certainly continue to study Recommendation D.6 if the Assembly so desired.

2.3.2.7 The *Chairman* said that if he heard no objection he would take it that the Assembly wished to adopt draft Recommendation D.6, on the understanding that it could be modified at a later stage if further study showed that to be the desire of a majority.

It was so agreed.

2.3.2.8 Draft Recommendations D.11, D.12 and D.20 were *adopted*.

2.3.2.9 Draft Recommendation D.AA was *adopted* subject to the insertion of the following footnote to § 2.8.1 (Terminal share): "The United States of America and Canada retain the right to maintain an additional rate for terminal traffic to be routed beyond the international centre."

2.3.2.10 Draft Recommendations D.BB, D.CC, D.8X, D.8Y and D.EE were *adopted*.

2.4 *Part IV of the Report* (Document AP VII-No. 66)

2.4.1 *Draft revised Recommendations D.300 R to D.310 R*

2.4.1.1 The *delegate of Algeria*, referring to Recommendation D.301 R, asked whether the new standard accounting rates for national extension (§ 3.1.2) were to be applied from 1 January 1981. If that were the case, his Administration would find itself in some difficulty.

2.4.1.2 The *delegate of the U.S.S.R.*, referring to Recommendations D.300 R and D.301 R, said that his Administration reserved the right to decide when to adopt the maximum values for remuneration of the extension of international calls over the national network.

2.4.1.3 The *delegate of the Federal Republic of Germany*, replying to the *delegate of Algeria*, said it had been decided by the TEUREM Group that all the new rates would be applicable from 1 January 1981, irrespective of the service involved. Replying to the *delegate of the U.S.S.R.*, he pointed out that application of the new values would be a matter of bilateral agreement between Administrations.

Draft revised Recommendations D.300 R to D.310 R were *adopted*.

2.4.2 *Draft Supplement to the regional Recommendations on tariffs*

Adopted.

2.5 *Draft Opinion relating to the monetary unit to be used in international telecommunication relations* (Document AP VII-No. 68)

2.5.1 The *Deputy Secretary-General* suggested that the words "the next Administrative Telegraph and Telephone Conference" in the *expresses the opinion* section should be replaced by "the next competent World Administrative Conference".

2.5.2 The *delegate of the German Democratic Republic* said that his delegation considered Recommendation D.EE on the settlement of international telecommunication balances of accounts (Document AP VII-No. 65) to be an acceptable solution which met the requirements of all users. General recognition of the monetary unit, which must be universal, stable, compatible, simple and flexible, was an essential prerequisite for the efficiency of the Union's accounting system. His delegation supported the proposal in § 20.6 of Document AP VII-No. 64 that Study Group III should continue to study the matter in the next study period and considered that no final decision should be taken at the present stage. His country which was not a member of the International Monetary Fund, and his Administration noted that the gold franc had performed its function satisfactorily in recent years despite the confused international monetary situation and considered that it should be retained by the Union. Furthermore, the proposals in the draft Opinion in his view prejudged the outcome of future work on the question pending its consideration by the Plenipotentiary Conference in 1982.

2.5.3 The *delegates of the U.S.S.R. and Czechoslovakia* supported the views expressed by the previous speaker.

2.5.4 The *delegates of Spain, the United States, Brazil, Japan, Canada, Venezuela and Turkey* supported the draft Opinion, which was the result of very thorough deliberations.

2.5.5 The *delegate of Lebanon* considered that the draft Opinion could be approved for submission to the Plenipotentiary Conference, which was the only body with the authority to amend the Convention.

2.5.6 The *delegate of the United Kingdom* said that it would be interesting to know exactly what difficulties were being encountered in respect of the text, which seemed to his delegation to be sufficiently flexible to command general support.

2.5.7 The *delegate of Cuba* observed that, traditionally, decisions on draft Recommendations and Opinions were taken by consensus. As that did not seem to be possible in the present case, the best course would perhaps be to revise the text with a view to finding a generally acceptable solution.

2.5.8 The *Chairman* suggested that the Chairman of Study Group III should hold consultations with the delegations concerned with a view to reaching agreement on a revised text of the draft Opinion.

It was so *agreed*.

2.5.9 The *Chairman* said that, with the exception of the draft Opinion concerning the monetary unit, the Assembly had completed considerations of the report of Study Group III. On behalf of all delegations, he thanked the Chairman of the Study Group and all those who had participated in its work for their outstanding efforts.

3 **Report of Joint Working Party SMM (Maritime Mobile Service)** (Documents AP VII-Nos. 98, 99 + Corr. 1.; Temporary Documents Nos. 16 and 45)

3.1 The *Chairman of Joint Working Party SMM* (Mr. Jaspers, Netherlands) introduced the Report of the Joint Working Party. With regard to the improvement of accounting and operating methods in the Maritime Mobile Service, the Joint Working Party, despite the complexity of the problem and the variety of opinions, had managed to reach a compromise solution during the past study period. One of the principal questions adopted concerned the need to specify

more precisely those responsible for accounting, and also to limit the number of accounting addresses. The number of accounting authorities in the maritime services at present was almost unlimited whereas a single address for maritime accounts would simplify the work of land stations. However, in many countries having wide fields of operation it was necessary to maintain a multi-address system. After lengthy debate it was agreed to limit the number of accounting authorities to 25. Concerning the settlement of maritime accounts, some Administrations had stated that in the last resort they were not prepared to accept financial responsibility for bad debts. It was agreed that if maritime accounts remained unpaid, the licensing Administration should take all possible measures in accordance with national legislation to ensure the settlement of accounts by the licence holder.

On the subject of mobile station charges, most members were convinced that the best solution would be to abolish these accounts. However, many delegations insisted on a remuneration for the use of ship stations. A solution was reached embodying the following principles: mobile station charges could only be applied in manually operated systems; they could not be applied in automatic services or in maritime mobile-satellite services; finally, mobile station charges should be abolished for traffic routed after 31 December 1987 and, in the meantime, to simplify operating and accounting procedures, standardized mobile station charges should be applied.

On the question of future developments, the Joint Working Party had been concerned mainly with semi-automatic single-operator working, radiotelex answer-back codes, the accounting aspects of ship station identification and the accounting in automatic services. Most of these questions had been dealt with satisfactorily in the expanded Recommendations now before the Plenary Assembly in Document AP VII-No. 99. Questions not yet dealt with would be studied in the new draft Questions proposed in Document AP VII-No. 100.

The new Radio Regulations stipulated that Articles 37 to 40 and their appendices, together with the Additional Radio Regulations, would be abrogated on 1 January 1981, and that the new article on maritime mobile services would come into force on the same day. Consequently, the provisions of the Recommendations replacing the abrogated Articles also would come into force on 1 January 1981.

3.2 The *Deputy Secretary-General* called attention to Temporary Document No. 45 containing considerations by the General Secretariat relating to the three draft Recommendations in Document AP VII-No. 99.

The wording of those Recommendations should first be brought into line with the terminology used in the WARC-79 texts and thus, after adoption of the Recommendations, some editing might be required with regard to aspects of stations, order of priority, legal time (UTC) and the publication of information in the List of Coast Stations. The word "Administration" used throughout Document AP VII-No. 99 was considered to apply also to recognized private operating agencies, but it should be made clear that only such agencies as were authorized by Administrations to do so could send the Secretary-General notifications concerning charges and related matters. Once the Recommendations had been adopted by the Plenary Assembly, the matter could be left to a small editorial group consisting of Mr. Jaspers and a few of the delegations concerned.

If there were any problems concerning the new Radio Regulations, they could be solved by the World Administrative Radio Conference for the mobile services for which the Administrative Council had prepared an agenda and which was scheduled for the first week of March 1982.

3.3 The *Chairman of Joint Working Party SMM* said that although the provisions of the Recommendations proposed were admittedly not strictly in accordance with the new Radio Regulations, total alignment was not essential so long as there was no discrepancy between the two texts, particularly since certain provisions of the Recommendations were more detailed than the Regulations. He could, however, agree to the creation of an editorial group to review the drafting of the Recommendations.

The *Chairman* suggested that the Chairman of Joint Working Party SMM should, when the time came, get together with representatives of the General Secretariat and of the CCITT to re-examine the wording of the Recommendations adopted; so far as possible, they should confine themselves to inserting footnotes giving the new terms and other information required.

That procedure was *adopted*.

3.4 Draft Recommendation D.90/F.111 (Charging, accounting and refunds in the Maritime Mobile Service) was *adopted*.

3.5 Draft Recommendation E.200/F.110 (Operational provisions for the Maritime Mobile Service) was *adopted*.

3.6 Draft Recommendation F.130 (Maritime answer-back codes) was *adopted*.

3.7 The report of Joint Working Party SMM as a whole, was *adopted*.

3.8 The *Chairman* thanked the Chairman and members of Joint Working Party SMM for the excellent work they had accomplished.

3.9 The meeting adjourned at 12.35 hours and was resumed at 14.30 hours.

4 Report of the Working Party on the CCITT Book (Temporary Documents Nos. 41/PLEN. + Corr. and 35/PLEN.)

4.1 The *Chairman of the Working Party on the CCITT Book* (Mr. Grainson, Belgium) introduced the above Report and expressed appreciation for the assistance of the Deputy Secretary-General for cost aspects and a CCITT Councillor

for editorial matters. The Working Party had agreed on a number of conclusions and recommendations which were set out in §§ 2.2 to 2.5 of the Report.

4.2 Concerning Contribution No. 1, the *delegate of Spain* said it should be made clear that the real issue was not the conditions of sale but its separate publication. He found the text in the Corrigendum too restrictive in its reference to distribution to members of Study Groups and asked how the Working Party had reacted to the proposal to supply to Administrations several copies of a single Recommendation upon request.

4.2.1 The *Deputy Secretary-General* confirmed that the General Secretariat was in a position to meet such requests at low cost.

4.2.2 The *Chairman* suggested that § 2.4.1 be re-worded to make that point clear.

4.2.3 The *Deputy Secretary-General* said that Contribution No. 1 would of course be distributed free of charge to all those who normally receive CCITT documents.

In reply to the *delegate of France*, who asked how the rules for establishing potential economies were to be formulated, the *Deputy Secretary-General* explained that the Working Party had tended to agree with the General Secretariat that the publication of texts in duplicate should be avoided. One of the difficulties arising from the proposal by the Nordic countries in Temporary Document No. 35/PLEN. was that in one case the information in question was already published in another service document approved by WARC-79 of which 30 000 copies had already been sold. With respect to the Manual, an extra page could be added giving cross-references. As for the publication of a low-cost document grouping a number of associated Recommendations, the Members of the Union would be consulted on their readiness to buy such an additional booklet at a price covering operational costs, but such a document would not be produced unless Members indicated their willingness to purchase it. It would be useful for potential markets and production possibilities to be determined before the next Plenary Assembly.

4.3 The *Chairman* asked whether the Assembly was prepared to entrust the CCITT Secretariat to revise Resolutions Nos. 4 and 5 on the basis of the recommendations in the Working Party's Report.

4.4 Several reservations having been expressed with respect to § 2.5, the *Chairman* noted agreement on the contents of §§ 2.1 and 2.4 and requested the Secretariat to update the Resolutions accordingly, without a new examination by Plenary Assembly.

4.5 The *Chairman* recalled that the delegate of Japan, in the discussion of Document AP VII-No. 95 (Publication of the 1981 edition of the CCITT Book), had asked for corrections to be made to the titles of certain Sections and that the question had been deferred until the Reports of Study Groups I, II and III had been adopted. If the Assembly had no objection, he would propose that the matter be settled between the delegate of Japan, the three Study Group Chairmen concerned, and CCITT Secretariat, without a new examination by the Plenary Assembly.

It was so agreed.

4.6 The *Chairman* then invited comments on § 2.5 of the Report which referred to "general agreement" on the substitution of paragraph numbering for parallel page-numbering.

4.6.1 The *delegate of Spain* said that the advantages of abolishing parallel page-numbering had not been made evident; the system had proved of great value in references to documents in the three working languages and any alternative system might well result in confusion. A saving in money was not the only factor to be considered, if indeed it were to be demonstrated: the abolition of the system would demand closer revision and improved referencing of texts, which in turn would require qualified staff and extra expense.

4.6.2 The *delegate of France* supported those remarks and pointed out that the Working Party had not been unanimous in its agreement. The French delegation had expressed reservations and had merely inclined to the majority.

4.6.3 The *delegate of the United Kingdom* asked whether Circular-letter No. 129, originating in a decision of the Administrative Council – reproduced as Annex A to Temporary Document No. 35/PLEN. – remained valid. If it did, then a return to parallel page-numbering would involve a constitutional issue.

4.6.4 The *Deputy Secretary-General* confirmed that that was the case. The decision had been endorsed by the previous CCITT Plenary Assembly but parallel page-numbering had been retained in the *Orange Book* because of the limited time available for publication and the fact that the paragraph numbering in CCITT texts was not consistent. He added that the use of parallel page-numbering in CCITT documents would give rise to vast problems.

4.6.5 The *delegate of Italy*, supported by the *delegate of France*, pointed out that the Administrative Council decision referred to documentation, and did not mention the Volumes which were the output of the Plenary Assemblies. Before a decision were taken, he would appreciate further justification of the economic or other advantages of paragraph numbering over parallel page-numbering.

4.6.6 The *Director of the CCITT* agreed that paragraph numbering was used in the documents of the CCITT but he saw advantages in the use of parallel page-numbering for the Plenary Assembly Volumes.

4.6.7 The *delegate of the Federal Republic of Germany*, supported by the *delegate of the United Kingdom*, said he took the Administrative Council decision to refer to all publications and therefore considered that the Plenary Assembly was subject to that constraint.

4.6.8 In reply to the *delegate of Lebanon* who asked what action the CCIR Plenary Assembly had taken on the decision, the *Director of the CCIR* said that to his recollection the decision had not been opposed.



4.6.9 The *delegate of France* recalled that as the Secretary-General himself had attached considerable importance to the issue, no discussion had been allowed on the subject. No reference had been made to the use of paragraph numbering as a substitute and in fact at CCI meetings delegates still continued to refer to page numbers.

4.6.10 The *Chairman* said that the first question was whether or not the Plenary Assembly was itself competent to take a decision. If it was not, the matter was closed; if it was, then factors of both economy and efficiency must be taken into account.

He therefore suggested that the point be passed back to the Working Party, which would report to the Assembly the following week.

4.6.11 The *delegate of Switzerland* endorsed that suggestion.

It was so *agreed*.

5 Report of Study Group XIV (Documents AP VII-Nos. 79, 120)

5.1 The *Chairman of Study Group XIV* (Mr. Blanc, France) described the work of Study Group XIV and observed that, given its workload, a larger number of meetings should be scheduled for the future and, in particular, that there should be at least three working meetings at appropriate intervals during the study period. He drew attention to the salient points of certain Questions that had been taken up by the Study Group and to the proposal for new and revised Series T Recommendations, including new Recommendation A.21 (Document AP VII-No. 79, Part III). The latter Recommendation dealt with collaboration with other international organizations and ought therefore to be discussed by the Plenary Assembly in connection with the Report of Study Group VIII. Recommendation T.16 (Facsimile transmission of meteorological charts over radio circuits) was considered to come within the purview of the World Meteorological Organization and should therefore be deleted. Recommendation T.30 represented by far the most important part of the Study Group's work and contained an exhaustive analysis of procedures for document facsimile transmission in the general switched telephone network. Recommendation T.35 (Application of CCITT Series T Recommendations) posed a particular problem in that it derived from a temporary document published on the initiative of the CCITT Secretariat and not of Study Group XIV. Moreover, the text had not yet been analyzed by Study Group I and it would therefore be inappropriate, at the present stage, for the Assembly to adopt it. He had written to the Director of the CCITT on the subject (Document AP VII-No. 120), indicating that he was opposed to its submission as part of the Series T Recommendations. He proposed that the Assembly should decide not to take it into account as part of the Report of Study Group XIV.

5.2 The *representative of the International Organization for Standardization* said that Recommendation T.35 referred to two types of facsimile terminals which the ISO had been studying for some time. His organization therefore sought assurance that the subject would be taken up at some time in the course of the proceedings, if it was not discussed in connection with the Report of Study Group XIV.

5.3 The *delegate of the United Kingdom* said that he had consulted the Chairmen of Working Parties 1 and 3 of Study group XIV, who had indicated that there might be operational problems if the information contained in Recommendation T.35 was omitted from the proceedings altogether and therefore not made available to the other Study Groups. He suggested that the text be annexed for guidance to a Question to be submitted to the appropriate Study Group for the next Plenary Assembly. That action should also meet the objection raised by the representative of the ISO.

5.4 The *delegates of France, Switzerland* (speaking as Chairman of Study Group I) and the *United States* supported that view.

5.5 The *Chairman of Study Group XIV* expressed his agreement with the proposed solution, adding that there was also a certain amount of terminology that needed clarifying.

5.6 Recommendation A.21

It was *agreed* that Recommendation A.21 should be discussed by the Plenary Assembly in conjunction with the Report of Study Group VIII.

5.7 Recommendation T.16

It was *agreed* to delete Recommendation T.16

5.8 New Recommendations T.4 and T.21

Adopted.

5.9 Revised Recommendations T.0, T.3, T.10, T.10 bis, T.11 and T.30

Adopted.

5.10 Recommendation T.35

It was *agreed* to withdraw Recommendation T.35 from the Report of Study Group XIV, with a view to its being annexed to a Question submitted to the appropriate Study Group or Groups.

With the stated reservations regarding Recommendations A.21 and T.35, the Report (Document AP VII-No. 79) was *adopted*.

5.11 The *Chairman of Study Group XIV* informed the Plenary Assembly that he was retiring from the office of Chairman and thanked all those, especially the members of the Specialized Secretariat, who had assisted him in his task during the past study period.

5.12 The *Chairman*, on behalf of the Plenary Assembly, thanked Mr. Blanc for his valuable work. He felt that Recommendation T.30, which had been worked out under his Chairmanship, was a remarkable achievement and a tribute to his untiring efforts. (*Applause*)

The meeting rose at 16.20 hours.

ANNEX A

Statement by the Representative of the Society for Worldwide Interbank Financial Telecommunications S.C. (SWIFT)

"Mr. Chairman,

It is an honour for my organization to be present at this Plenary Assembly for the first time, as we have now become a member of the CCITT. After our first visit to the last plenary meeting of Study Group III, we are able to appreciate the high quality and tremendous amount of work performed by the various Administrations in this Study Group. We too hope to be able to contribute to the work of the CCITT.

However, as far as my organization is concerned, I must express my disappointment on a particular Recommendation. I will not disclose a secret by identifying it as draft Recommendation D.6, or by telling you that this Recommendation has been put forward exclusively for my organization, without our participation. To inform over 120 delegations that were not present for the final adoption of the draft by Study Group III, I would like, without taking too much of the precious time of this Assembly, to comment briefly on our activities as they related to draft Recommendation D.6.

SWIFT is a cooperative non-profit international organization owned and controlled by more than 750 banks in 32 countries. Our activity is to handle international payments which our member banks require for their customers, ordinary people like you and me, private companies and, in many cases, governmental organizations. We are financially liable for quick, safe and secure handling of these international payments.

Our activity is very important for the smooth functioning of international trade and the disappearance of barriers between our member countries.

Some Administrations rejected our only intervention in Study Group III, on a draft Recommendation that was tailor-made for us. I quote from Contribution No. 130 of Study Group III, page 6: "The request was considered to be out of order" and this, considering that we had no opportunity to be involved earlier.

On certain inaccuracies observed in the draft Recommendation, the reply is that "Recommendation D.6 represents an acceptable compromise between the interests of users and those of Administrations". We wonder where is the compromise and where are the users. This Recommendation has been prepared by a limited number of Administrations of one continent to impose their view without considering the possible international repercussions for developing countries. We wonder as well how many user organizations were really consulted at the international level and how many of the Administrations in question consulted their national user organization on draft Recommendation D.6 to be able to speak about an acceptable compromise. We observe that the leased channel rates we are requesting were and will be an acceptable compromise between users and Administrations. This is lucrative for Administrations all over the world and useful to users. Draft Recommendation D.6, however, is a step towards the abolition of this service. It will reduce the number of alternatives available to several Administrations who intend to accept services like ours for the benefit of their country.

To conclude, Mr. Chairman, our activity is important for the promotion of international trade in a financially secure way in the difficult economic environment with which every country is faced today. It is important for the developing countries where we are now expanding. All this may be jeopardized if the developing countries wishing to become an integral part of the telecommunication world of the future have to apply Recommendation D.6 as it is presently worded.

We think these considerations might have been omitted in establishing the draft in its present form. These facts have also been outlined in Document AP VII-No. 110 from Belgium; I quote from page 2: "the work of the Study Groups is a virtual monopoly of the delegations from the so-called developed countries" and "the Study Groups pay insufficient attention to the problems of the developing countries".

Mr. Chairman, we do not oppose the basic principles of draft Recommendation D.6 and we understand the concern of some of the Administrations. However, the current text is the result of so many compromises between Administrations, forgetting the users, that it leaves the door open to misuse by one or more countries; in our opinion, this runs counter to the spirit of international cooperation promoted by the CCITT.

Therefore, Mr. Chairman, in order to have a really acceptable compromise, we propose that draft Recommendation D.6 should be reviewed again on a truly international basis before a final decision is taken."

ANNEX B

**Statement by the Representative of the
International Press Telecommunications Council (IPTC)**

“Mr. Chairman,

It is nearly always difficult to draft a Recommendation of some political, economic or social significance for universal observance in a world where people have widely different needs, and if I may be particularly sensitive to the realities of Study Group III, may I say how discouraging it must be to its Chairman and its members when one of its draft Recommendations, upon which they have worked so laboriously and for so long, should evoke a twinge of anxiety at a Plenary Assembly.

According to the report of its Final Meeting, Study Group III believes that draft Recommendation D.6 represents an acceptable compromise between the interests of users and of Administrations. Yet I wonder of this opinion is not so much based upon empirical research as upon wishful thinking. Only 31 Administrations or some 20 per cent of the CCITT's membership were present upon that occasion while the users, too, were few in number. Yet two of them have expressed reservations, and in our case continually, upon the merits of this draft as an inducement to the exchange of information between the peoples of the world.

It is, Sir, the concern of us all that more and more Administrations and users shall participate in the work of the CCITT and its Study Groups and for so long as they do not, it follows that the authority of a Recommendation may suffer. I say this with regret for the continuing success of this prestigious organization is something I wish and fervently. What concerns me, Mr. Chairman, is the notion that the charges for leased circuits shall in exceptional cases be based upon volume to some greater or lesser extent, for this seems to herald some gradual yet perceptible departure from the norm that private leased circuits shall be made available for flat rate rentals. I know that the Final Report of Study Group III to this Plenary Assembly reaffirms your commitment to this long-established practice, but the commitment seems qualified by some subsequent paragraph which states the need for Administrations to make every effort to satisfy the specific requirements of different categories of users through public networks and particularly the data networks. What I can but conclude is that the ultimate goal is for public networks to accommodate every kind of telecommunication requirement including the private leased circuits and in this case for charges which shall be partly volume-tariffed.

Now, Mr. Chairman, you have told us this morning that my interpretation of this paragraph is wrong and for this I am most grateful, for the eventual withdrawal of flat rate rentals would not only reduce freedom of choice but also penalize, in terms of principle, those who lease private circuits for maximum utilization. Amongst these are the press and particularly the news agencies, of which all but one or two are debarred from making profits by their respective constitutions. The circulation of information is their paramount duty not only to those who read newspapers but also to those who listen to the radio and watch television. That this circulation should be hampered by the application of volume charging for leased circuits would be, in my humble opinion, socially unacceptable.

Here I must think of the emerging non-aligned news agency pool so dear to the hearts of many African, Asian and Latin American countries, and even to some in Europe as well. Volume charging should not be allowed to stunt its growth.

I began, Sir, by trying to show some understanding of the difficulties confronting a Study Group such as yours, and I would also say that the relevance of a particular Recommendation to some specific situation may also be affected by the passage of time and the consequences of the sudden and the unexpected. Since your last meeting, two Resolutions have been adopted by the 21st General Conference of UNESCO in Belgrade. The first of these was put by Algeria, Cuba, Iraq, Nigeria, Pakistan, Sri Lanka, Tunisia and Venezuela on behalf of the Group of 77 and of the non-aligned countries, while the second was proposed by France and supported by Finland, Mexico, Senegal and Togo. In their separate ways, both of these Resolutions have some direct or indirect bearing upon the question of volume charging for leased circuits made available to the media. The first calls for the establishment of flat rate ceiling rentals while the second from France is specific in stressing the need for full employment of the means of transmission currently available.

Mr. Chairman, the international exchange of information has become a burning political issue and whatever any of us may think of these Resolutions, none shall find them easy to reconcile with volume charging for private leased circuits. Only you can tell how much it matters if UNESCO proposes something and a Committee of the ITU something contradictory. Yet here I can only endorse the sentiments of our Director when he spoke so eloquently on Monday upon the need for closer collaboration between the CCITT and some of the specialized agencies of the United Nations. I welcome this approach which makes me wonder whether Recommendation D.6 might be waived in the case of circuits leased for the transmission of news pending the results of that collaboration and some re-examination of this Recommendation by your Study Group during the next plenary period. Yet if this is not possible, I shall be content with what you told us this morning, that fears about the withdrawal of flat rate rentals for leased circuits are entirely without foundation.”

FIFTH PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Friday, 14 November 1980, at 14.30 hrs*Subjects discussed:*

- 1 Report by Study Group I
- 2 CCITT Opinion No. 9
- 3 Report by Study Group XVI
- 4 Report by Study Group VII
- 5 Report by Study Group VIII
- 6 Cooperation between the CCIR and the CCITT on new services
- 7 Timetable of meetings for the second week

1 Report by Study Group I [Documents AP VII-Nos. 90, 91, 93 and 94; Temporary Documents Nos. 15 and 30 (Rev. 1)]

1.1 The *Chairman of Study Group I* (Mr. Freiburghaus, Switzerland), introducing the Report by Study Group I, said that during the past study period Study Group I had prepared 13 draft new Recommendations and 12 proposed amendments to existing F series Recommendations (Document AP VII-No. 91). The Study Group had held 18 meetings to carry out that formidable task. The complexity of the studies undertaken had called for coordination and collaboration with other Study Groups and bodies concerned.

With regard to new services, draft Recommendations F.160, F.170 and F.180 on facsimile reflected the Study Group's intention, working closely with Study Group XIV, to lay the foundations of an international service operated with Group 2 apparatus – Bureaufax and Telefax.

Teletex, which was the subject of draft Recommendation F.200, involved new and more sophisticated electronic correspondence facilities; it was aimed at facilitating and accelerating the exchange of ordinary correspondence. The objective, in that field, was to promote close cooperation with the telex service and, if possible, with other teleinformatic services; in the future, close collaboration with facsimile and Videotex should also be envisaged.

With regard to Videotex, the possibility of using several different systems in an initial stage should not be ruled out, but intensive efforts should be made to increase standardization with a view to obtaining a compatible international service in the future. The studies had certainly not been completed, but they had got off to a good start and had aroused keen interest on the part of many Administrations.

Those three new services have been widely discussed at two international symposia organized by the CCITT.

Study Group I proposed that the amended Recommendations should come into force on 1 October 1981, at the same time as the other Recommendations of the same group and the related instructions and that the new Recommendations should come into effect on 1 January 1981. The early date had been suggested in view of the need to follow up and influence technological development and to put the CCITT in a position to standardize in good time the services for which the public was waiting.

With regard to terms and definitions, the term "telegraphy" was used in an unduly restrictive sense which was no longer compatible with the range of activities of Study Group I. The Study Group's name should therefore be changed: the expression "teleinformatic services" reflected much more accurately the terms of reference of Study Group I, which dealt with all "non-voice" services.

1.2 Draft new F series Recommendations (Document AP VII-No. 91)

1.2.1 The *Delegate of Spain*, in connection with draft Recommendation F.170, said that, in Spanish, the term "Bureaufax" should be spelt "Burofax".

The *Chairman* said that that correction would be made in the final text.

1.2.2 The *Deputy Secretary-General*, referring to draft Recommendation F.120, and in particular to § 3.2 on the identification of a ship's geographical region, said that the principle of regional sub-divisions as described in that paragraph had not been envisaged for the Maritime Mobile and Maritime Mobile-Satellite Services by WARC-79. Since the preparation of the table of national identity digits was still in the initial stage and the factors and constraints which would ultimately decide the allocation of the available codes had not yet all been studied, some caution was required if the regional distribution of identity digits indicated in § 3.2 was not, later, to cause difficulty in preparing a table of national identity digits. The regional allocation of the digits in question should therefore be regarded as an option which would be taken into account in the studies serving as a basis for a final decision by the WARC for the mobile services to be held in March 1982.

1.2.3 The *delegate of Greece* asked for an explanation of the term “electronic mail” which many people within administrations tended to equate more or less with the Teletex services.

1.2.4 The *delegate of Japan* said that it was unnecessary for the moment to amend draft Recommendation F.120: § 3.2 should remain as it stood and the question should be further studied by the General Secretariat, the CCITT and the CCIR.

1.2.5 The *Chairman of Study Group I*, referring to the statement by the Deputy Secretary-General on draft Recommendation F.120, said that § 3.2 represented merely a possible solution arrived at after lengthy debate, which might be improved, if appropriate, in the light of further developments. Study Group I had not yet found an exact definition of the expression “electronic mail”: the question might be discussed with the postal authorities concerned.

1.2.6 The draft new F series Recommendations were *adopted*.

1.3 *Amendments to existing F series Recommendations* (Document AP VII-No. 91)

1.3.1 The *Deputy Secretary-General* suggested that the amended Recommendations F.1 and F.42 should form the basis of new instructions to come into force on 1 October 1981.

It was so *decided*.

1.3.2 The amendments to the existing F series Recommendations were *adopted*.

1.4 The *Chairman* said that Document AP VII-No. 93 would be examined under agenda item 2. He proposed that Document AP VII-No. 94, which dealt with the setting up, terms of reference and organization of work of Study Group I should be referred to Committee A.

It was so *decided*.

1.5 The *Chairman* congratulated the Chairman and all the members of Study Group I on their work, which was remarkable both in quality and quantity.

1.6 The *delegate of France* pointed out that, in the work of Study Group I, the English word “facsimile” was rightly translated by “télécopie” in French. He suggested that the French-speaking members of Study Group XIV should adopt the same term.

It was so *decided*.

2 CCITT Opinion No. 9 (Documents AP VII-Nos. 93, 96, 127; Temporary Document No. 25/PLEN.)

2.1 The *Director of the CCITT* recalled that the question of the possible replacement of the terms “telegraphy” and “telephony” in the CCITT’s terms of reference had first been raised in Resolution No. 44 of the Plenipotentiary Conference (Malaga-Torremolinos, 1973). The outcome of the VIth Plenary Assembly’s discussion of the issue was Opinion No. 9, in respect of which a number of proposals had been submitted for consideration by the current Assembly.

2.2 The *Chairman* said that the proposals in question were by the CMV (Document AP VII-No. 96, § 3.1.1), Study Group I (Document AP VII-No. 93, § 3.2) and Canada (Document AP VII-No. 127).

2.3 The *Chairman of Study Group II*, referring to § 3.1.1 of Document AP VII-No. 96, observed that Study Group II had not been consulted by the CMV on its proposed definition of the term “telephony”. Consequently, he reserved his position on that proposal until such time as it had been discussed and approved by both Study Group II and any other bodies concerned.

2.4 The *Chairman of the CMV* gave a chronological account of the action taken by the Joint Study Group to meet the request addressed to it in Resolution No. 44. Owing to the schedule set for the final meetings of the various Study Groups, the CMV had not been able to coordinate its work with that of either Study Group I or Study Group II. Furthermore, it had deemed the problem of the definition of “telephony” to be less serious than that which arose in connection with the term “telegraphy”, which was defined differently in the CCIR and the CCITT. The proposal by the CMV in Document AP VII-No. 96 was only one of several elements which should be taken into consideration in the discussion.

2.5 The *Deputy Secretary-General* said that it was important to provide the next Plenipotentiary Conference with well-grounded guidelines. He drew attention to Temporary Document No. 25/PLEN., which outlined the action taken by WARC-79 on the question. It was generally recognized that the definition of telegraphy in the Radio Regulations needed to be different from that used in the Telegraph Regulations. Opinion No. 9 did not perhaps take full account of certain recent technological developments, particularly in respect of the introduction of new services. The Plenary Assembly of the CCIR, which had considered the issue from its particular standpoint, had slightly altered the definition of radiocommunication as a result.

2.6 The *Director of the CCIR* said that the decision taken by the Plenary Assembly of the CCIR had been to qualify the term “radiocommunication” in the CCIR’s terms of reference set out in No. 70 of the Convention by adding the phrase “without limit of frequency range”. In that connection, CCITT Opinion No. 9 and CCIR Opinion No. 61 appeared to him to be perfectly compatible.

2.7 The *Chairman* considered that it would be appropriate for the Assembly to respond to Resolution No. 44 by adopting an Opinion for consideration by the next Plenipotentiary Conference. He suggested that a small Working Group

should be set up to study the related documents, prepare a draft Opinion setting out the terms of reference of the CCITT and, if possible, propose definitions for the terms “telephony” and “telegraphy”. He further suggested that the Working Group should be chaired by Mr. Marchese (United States) and that the General Secretariat, the CCIR and, of course, the CCITT should send representatives to its meetings.

It was so agreed.

2.8 The *delegates of France, Belgium, Switzerland, Canada, the Federal Republic of Germany, the United Kingdom, Italy, Japan, Mexico, Spain, Greece and the United States* said that their delegations wished to participate in the Working Group.

3 **Report of Study Group XVI** (Documents AP VII-Nos. 54, 55, 58, 113, 117; Temporary Documents Nos. 21/PLEN., 22/PLEN.)

3.1 The *Chairman of Study Group XVI* (Mr. Munday, United Kingdom), introducing the Report, said that one of the Study Group's main tasks had been to secure orderly transition from an all-analogue to an all-digital network and that a great deal of material had been drafted in that connection. After reviewing the topics with which the Study Group had dealt, he said that six new draft Recommendations and three new Supplements had been produced, six existing Recommendations had been extensively revised and fifteen others had been amended. The Study Group had completely answered six out of thirteen Questions and was proposing a total of seven new or continuing Questions for study in 1981-1984. Valuable cooperation had been received from several other CCITT Study Groups, CMBD, CCIR Study Group 8 and the CCITT Specialized Secretariat. He wished to pay a special tribute to Mr. Nachfolger, Canada, Vice-Chairman of Study Group XVI and Special Rapporteur who had now retired, for his outstanding contribution to the Study Group's work.

3.2 *Amendments to existing Recommendations and new Recommendations and their Annexes* (Documents AP VII-Nos. 54, 55, 117)

Adopted.

3.3 *New Supplements to G series Recommendations* (Document AP VII-No. 58)

Adopted.

3.4 *Final Report of Study Group XVI* (Document AP VII-No. 113)

3.4.1 The *Chairman of Study Group XVI* observed that his own name had been omitted from the list of participants in Chapter D and should be inserted in the appropriate place.

3.4.2 The *delegate of Sweden*, referring to Question 7/XVI (Chapter B, Section 7), considered that the question of whether or not the Manual “Transmission Planning of Switched Telephone Networks”, should be updated might usefully be raised in Committee D. If it were agreed that such updating was desirable, his Administration would be pleased to assume responsibility for that task in Study Group XVI.

3.4.3 The *Chairman of Study Group XVI* welcomed the offer by the Swedish Administration.

3.4.4 The *Chairman* said that if he heard no objection he would take it that the Assembly wished to adopt the Final Report of Study Group XVI in Document AP VII-No. 113, with the exception of the Questions to be examined by Committee B and on the understanding that the Study Group would make what arrangements it deemed appropriate for the updating of the Manual on transmission planning.

It was so agreed.

3.5 The *Chairman*, speaking on behalf of all present, thanked the Chairman of Study Group XVI for his excellent work.

4 **Report by Study Group VII** (Documents AP VII-Nos. 5, 6, 7, 8, 9, 10, 11 and 12)

4.1 The *Chairman of Study Group VII* (Mr. MacDonald, Canada) introduced his report, commending the work done by the members of Study Group VII and the cooperation given by the other CCITT Study Groups. He drew attention to the number of new and revised Recommendations and to the need to coordinate the work with that of other Study Groups, particularly with regard to vocabulary. He referred to the new fields of activity and the new arrangement of the forthcoming CCITT Book. The period had been very active and very fruitful, but it was only a beginning. He recalled the objectives of Study Group VII, the achievement of which would call for the assistance of a large number of experts.

4.2 The *Chairman* then opened discussion on the documents making up the report by Study Group VII.

4.3 *Proposals relating to new and revised Recommendations in the X series and to certain Recommendations in the A series* (Document AP VII-No. 6)

4.3.1 *Recommendation A.14*

4.3.1.1 The *representative of ISO*, replying to a question concerning Recommendation A.14 by the *Chairman of Study Group VII*, said that he appreciated the opportunity of making a general statement on cooperation between the CCITT and ISO. The participation of ISO experts in the present Plenary Assembly bore witness to the cooperation that existed between the two organizations on technical questions of mutual interest. ISO had taken an active part in the work of CCITT Study Groups VII, VIII and XVII while representatives of the CCITT had participated in the activities of ISO. Cooperation would be continued and improved to ensure better mutual assistance and understanding.

4.3.1.2 The *delegate of France* said that the present Plenary Assembly had already approved the first revision of Recommendation A.14 as prepared by the CCITT Secretariat, which was given in Annex B to Temporary Document No. 24. He wondered how the two texts might be merged in the final version to be included in the future CCITT Book.

4.3.1.3 The *Chairman* said that harmonization of the texts would present no difficulty.

4.3.1.4 The *Chairman of Study Group VII* also thought that harmonization of the texts presented no problem; he pointed out that an omitted sentence had been restored to stress the need to take account of the work carried out by other international organizations.

4.3.1.5 Recommendation A.14 was *adopted* after certain adjustments to bring the two versions into line.

4.3.2 *Recommendation A.20*

4.3.2.1 The *Chairman of Study Group VII* said that originally the Recommendation had concerned the transmission of accounting information. Its usefulness had been recognized, particularly in relation to international alphabet No. 5. At the last meeting of Study Group VII, however, it had been decided for lack of time that an addition proposed by the ISO should be left for examination by the Plenary Assembly. He proposed that Temporary Document No. 17 from the United States of America should be added to the list of documents examined and, subject to approval, that the delegation of the United States of America should be invited to submit the document so that it could be considered briefly.

4.3.2.2 That procedure was *approved*.

The *delegate of the United States of America* said that it was simply a matter of replacing the words "data processing" by the words "data processing and office equipment" at two points which would be communicated later to the Secretariat.

4.3.2.3 The *representative of ISO* also referred to the updating of Recommendation A.20 which originally had dealt with the telephone service and had been revised to take account of the introduction of data transmission. Updating should be continued as the need arose. He drew attention to the problem of terminology which should be adapted to the needs of the new services. He then listed the experts of Study Group VII who had attended ISO meetings since 1976, stating that an equivalent number of ISO experts had probably participated in the work of Study Group VII. He expressed the hope that cooperation would continue as it greatly facilitated the establishment of ISO Standards and CCITT Recommendations.

4.3.2.4 Recommendation A.20 was *adopted* subject to certain corrections which would be forwarded to the CCITT Secretariat in due course.

4.3.3 *Recommendations X.1 to X.24*

Adopted.

4.4 *Recommendation X.25 (Document AP VII-No. 7)*

Adopted.

4.5 *Recommendations X.26 to X.61 (Document AP VII-No. 8)*

4.5.1 *Recommendations X.26 and X.27*

The *Chairman* recalled that Recommendations X.26 and X.27 were to be considered later as Recommendations V.10 and V.11, in the context of Study Group XVII's report.

4.5.2 *Recommendations X.28 to X.61*

The *delegate of France* drew the CCITT Secretariat's attention to certain translation errors in Recommendation X.61, which affected the form. It was simply a matter of aligning the terminology of Study Groups VII and XI. He requested that the fact be mentioned in the summary record and said that his Administration would try to submit a contribution with the necessary corrections as soon as possible.

Recommendations X.28 to X.61 were *adopted*.

4.6 *Recommendations X.70 and X.71 (Document AP VII-No. 9)*

Adopted.

4.7 *Recommendation X.75 (Document AP VII-No. 10)*

Recommendation X.75, which had already been approved provisionally in 1978, was *adopted*.

4.8 *Recommendations X.80 to X.180 (Document AP VII-No. 11)*

4.8.1 The *delegate of Greece* drew attention to an important point concerning Recommendation X.121 which had already been provisionally approved in 1978. His Administration considered that Question 4/VII and, by extension,

Recommendation X.121 should be studied further with a view to establishing a numbering plan which was both applicable to public data networks and, so far as possible, in keeping with the plan at present in force for the international telephone service. Among other things, that would avoid creating confusion among subscribers. Moreover, when the new integrated services networks were introduced, a single integrated numbering plan would surely be required at that time. He had no objection to the adoption of Recommendation X.121 provided some way could be found to enable Study Group VII to revert to the question later.

4.8.2 The *delegate of Spain* supported the views of the Greek delegate and said that many terms would have to be revised. He was aware of how much the Study Group had done in that connection and requested that the CCITT should help in continuing the work.

4.8.3 The *delegate of Italy*, referring to the statements by the preceding speakers, drew attention to Temporary Document No. 5 of Committee B in which his country proposed a text for Question 4/VII which might serve as a basis for establishing a numbering plan for public data networks. The matter would, however, be considered by Committee B.

4.8.4 Recommendation X.121 was *adopted* pending further study; Committee B would indicate the relevant Question.

4.8.5 Recommendations X.80 to X.180 were *adopted*.

4.9 *Proposed new or revised definitions* (Document AP VII-No. 12)

4.9.1 The *Chairman* wondered what eventually would happen to the document in question insofar as in other Study Groups the texts on terminology were the subject of Recommendations.

4.9.2 The *Director of the CCITT* said that for procedural reasons, the document should be issued in the form of a Series X Recommendation.

4.9.3 The *Chairman* said that, if that procedure was approved, the CCITT Secretariat would take the necessary action. It was so *decided*.

4.9.4 The *Chairman of Study Group VII* said that although the remainder of the document admittedly concerned Committee B, he nonetheless wished to draw the attention for information purposes to the additional item for draft Question 38/VII submitted by Cable and Wireless.

4.9.5 The *representative of ECMA* expressed his satisfaction with the cooperation that existed between his Association and the CCITT. The ECMA had followed with interest the work of the CCITT, particularly that of the Study Groups which dealt with data transmission, text communication and related subjects. In view of the trend towards an integrated services digital network, cooperation should be further increased. Although the ECMA recommendation aimed at avoiding the proliferation of interfaces had not yet produced particularly positive results, the introduction of the ISDN was a step towards the establishment of a universal interface. His Association had noted with satisfaction that the Study Group VII Rapporteur on layered models of public data networks services and applications had taken account of the work done by ECMA and ISO in that field. A most rewarding exchange of views had taken place between those bodies. At the moment, only one CCITT Study Group was responsible for studying the matter and it was highly desirable that the principles adopted in that respect should be observed by the CCITT as a whole. He thanked those whose efforts had contributed to the success of the work done and expressed the hope that ECMA would continue to participate as actively in CCITT work during the next study period.

4.10 The *Chairman* thanked the Chairman and members of Study Group VII for having completed such an impressive task in so short a time.

5 Report by Study Group VIII (Documents AP VII-Nos. 87, 88, 89)

5.1 The *Chairman of Study Group VIII* (Mr. Staudinger, Federal Republic of Germany) introduced the Study Group's Report: Part II (Document AP VII-No. 87) related to the 11 Questions studied, of which five had been answered completely and four in part; the Questions proposed for study (to be considered by Committee B) were contained in Part IV of the Report (Document AP VII-No. 89). Part III (Document AP VII-No. 88) contained the text of five new Recommendations in the S series (S.18-S.22) in connection with which the Chairman wished to express his gratitude for the assistance and advice provided on many occasions by the Chairmen of Study Groups IX and XVII.

Draft Recommendations S.60, S.61, S.62 and S.70 concerning the Teletex service had been made available just in time thanks to very careful and diligent study including much appreciated contributions from ISO. The basic requirement for Teletex services to be able to be operated on any type of network at the discretion of each Administration had been considered an urgent matter and a Rapporteur had been appointed with a very precise mandate to study the matter in collaboration with experts from Study Group VII and ISO as necessary. A meeting had been convened and a Recommendation drafted which had met with unanimous approval. It was hoped to obtain the Plenary Assembly's approval to have it despatched in the very near future under the accelerated approval procedure.

Draft Recommendation S.100, designed to facilitate the orderly introduction of interactive Videotex, had been drawn up in one study period due to the active cooperation of delegates and officers and the valuable contribution from ISO.

Draft Recommendation A.21 (Collaboration with other international organizations) was based on previous discussions and the Chairman endorsed the amendments proposed by the United States in Temporary Document No. 17/PLEN., which could be incorporated together with a few others.

In conclusion, he thanked the CCITT Secretariat, particularly the Senior Councillor and Mr. Cabrera who would unfortunately soon be leaving the CCITT's service.

5.2 The *Chairman* invited the Assembly to consider the Draft Recommendations in Section 1 of Document AP VII-No. 88.

5.2.1 *Draft new Recommendations S.18-S.22, S.60-S.62, S.70 and S.100*

Adopted.

5.2.2 *Draft Recommendation A.21* (Collaboration with other international organizations on CCITT defined teleinformatic services)

5.2.2.1 The *delegate of Canada* considered that it would be wise for Working Party COM A/1 to give some general consideration to draft Recommendation A.21, which was similar in range to Recommendations from other Study Groups. Committee A might, for instance, propose a consolidated Recommendation covering all aspects of such collaboration, in which case A.21 would become redundant.

5.2.2.2 The *Chairman* pointed out that a number of similar Recommendations in the A series had already been adopted; he thought the Recommendation under consideration contained only general principles and did not touch upon the organization of work, which were within the purview of Committee A. If there were no strong objection, he would therefore suggest that it be adopted by Plenary.

5.2.2.3 It was so *agreed*, and the Recommendation was *adopted*.

5.2.2.4 The *delegate of Canada* said that he did not oppose that action, but reserved the right to revert to the draft Recommendation after his Administration had given it due consideration.

5.3 *Section 2: Amendments to existing Recommendations*

The proposed amendments to Recommendations S.3-S.6, S.9, S.11, S.12, S.16, V.4 and X.4 were *adopted*.

5.4 The Report of Study Group VIII as a whole was *adopted*.

5.5 The *Director of the CCITT*, referring to the remarks by the Chairman of Study Group VIII concerning the Symposium held in Montreal which had been most successful, announced that a third such Symposium was being organized for 1982 to deal with text and data networks, the place and date not yet having been fixed.

5.6 The *Chairman* thanked the Chairman of Study Group VIII for his Group's excellent work in a field in which advances were being made very rapidly, a fact demonstrated by the new Recommendation which was already submitted for provisional approval.

5.7 The *representative of ISO* said that the earlier remarks made on behalf of the ISO applied equally to Study Group VIII, and he extended collective thanks to all the Study Groups which had been involved. He added that ISO would wish to participate in any future Symposium and would welcome an exchange of views in such an effective forum.

6 Cooperation between the CCIR and the CCITT in connection with the new services

6.1 The *Director of the CCIR* informed the Assembly that the CCIR had considered at its own Plenary Assembly that a degree of compatibility was desirable between the interactive Videotex services and broadcasting Teletext in the interests of both users and suppliers. Under Resolution No. 65 a Joint Ad Hoc Working Party had been set up and CCIR Study Group 11 had asked for an opportunity to present a draft Report on the status of the broadcasting Teletext work which was considered to relate most closely to the activities of Study Group VIII. Professor Cappuccini, Chairman of Working Party 11/3 of the CCIR, had been designated to present the Report.

6.2 The *Chairman of CCIR Interim Working Party 11/3* made the statement reproduced as Annex A.

6.3 The *delegate of Italy* pointed out that the Report referred also to still and slow-motion TV pictures; in that respect, it would be appropriate for the CCITT Plenary Assembly to look at the relevant CCIR Study Programme, as it had been modified.

6.4 The *Chairman of Interim Working Party 11/3* specified that CCIR Study Group 11 had suggested that contributions on the subject should be brought to the attention of CCIR Study Group 10 and of Study Groups VIII and XV of the CCITT.

6.5 At the suggestion of the *Director of the CCITT*, it was *agreed* that the representative of the CCIR would be asked to present a résumé of the documents in question to Committee B.

7. Schedule of meetings for the second week

7.1 The *Chairman* read out the proposed schedule of meetings for the following week. The meetings for Monday and Tuesday had been re-arranged to make room for meetings of the Working Parties on the CCITT Book and Opinion No. 9.

The Chairman also emphasized that Committee A was obliged to finish its work on Monday and that the Plenary was behind schedule, and he urged all delegations to bear those facts in mind. The programme contained in Temporary Document No. 1/PLEN. remained valid for Wednesday, Thursday and Friday.

The meeting rose at 18.40 hours.

ANNEX A

Statement by the Chairman of CCIR Interim Working Party 11/3

It is a great honour for me to have this opportunity to comment briefly, on behalf of CCIR Study Group 11, on the work carried out up to now by the Study Group on additional television services in general, and for conciseness, I will try to frame the results so far achieved in such a way as to make self-evident those points where close contact and cooperation between the two CCIs is required and to allow you to consider the appropriate measures that should be taken for assuring the most effective results.

The XIVth Plenary Assembly of the CCIR in 1978 accelerated the work on Teletext in two ways, i.e. appointing two Interim Working Parties:

- the first, under Decision 33, IWP 11/3 within the terms of reference of CCIR Study Group 11;
- the second, under Resolution No. 65, a Joint CCIR/CCITT Working Party for determining the compatibility and interface requirements needed to ensure that the domestic television receiver could be used economically as a display device for both Teletext and Videotex; and for proposing an appropriate terminology for these two systems.

IWP 11/3 established liaison with CCITT Study Groups I and VIII, with the ISO, with the IEC and worked in close cooperation with the Joint Working Party.

The results achieved so far by the Joint Working Party have been included in both CCITT and CCIR texts. Concerning terminology, IWP 11/3 supplied the Joint Working Party with a definition of Teletext. The Joint Working Party spent considerable time and effort on this problem and made a number of suggestions, but found insurmountable difficulties in achieving unanimous results.

At the Interim Meeting, Study Group 11 devoted additional time and effort to terminology and finally came to the conclusion that the expertise of the Joint Group CMV should be sought in trying urgently to resolve these problems of terminology. Furthermore, Study Group 11 decided to take no action concerning Resolution No. 65 pending a final decision by the XVth CCIR Plenary Assembly in 1982. This decision by IWP 11/3 and Study Group 11 was brought to the attention and consideration of your Committee A this morning.

Concerning the activities coordinated by IWP 11/3, a Draft Report gives up-to-date information on the characteristics of Teletext systems. Extensive use was made of the latest version of CCITT Recommendations F.300 and S.100.

A second Draft Report covers various aspects of data broadcasting systems; mainly methods of measurement, results of field trials and theoretical studies. The existing Report 802, suitably updated, provided much of the information required. A revised version of Report 802 deals with additional broadcasting services of which Teletext is but one using the television channel. For completeness, services using sound broadcasting channels (AM and FM) are also included and appropriate liaison within CCIR Study Groups has been established. It is worth mentioning that other possibilities such as still picture and slow-motion television broadcasting, Teletext printout, radioprinter, TV and FM facsimile, etc., may require close cooperation with a number of CCITT Study Groups. The modified version of Decision 33 takes also into account "non-Teletext" applications.

SIXTH PLENARY MEETING

(Minutes amended at the ninth Plenary Meeting)

Monday, 17 November 1980, at 16.55 hours*Subjects discussed:*

- 1 Statement by the Secretary-General of the African Postal and Telecommunications Union
- 2 Report of Study Group IX
- 3 Report of Study Group X
- 4 Report of Study Group XVII

1 Statement by the Secretary-General of the African Postal and Telecommunications Union

1.1 The *Secretary-General of the African Postal and Telecommunications Union* made the statement reproduced in Annex A.

1.2 The *Chairman* thanked the Secretary-General of the above Union for his statement which he felt sure would be studied attentively both in Committee D and in the Plenary.

2 Report of Study Group IX (Documents AP VII-Nos. 47, 48, 49, Temporary Document 42/PLEN.)

2.1 The *Chairman of Study Group IX* (Mr. Brown, Australia), introducing the Report, said that the Study Group had made good progress in dealing with Questions 24/IX and 31/IX which had been considered urgent. Question 31/IX related to Recommendation R.111; the agreements reached on the latter were recorded in § 2.22 of Document AP VII-No. 48 and further contributions were awaited. Arising from the Questions dealt with by Study Group IX, five new Recommendations had been issued as well as proposals to revise twenty-one of the existing R series Recommendations and to delete two others. Full details were given in Part III of the Report. Part IV contained the proposals for 15 Questions developed by the Study Group for its programme of work during the following study period.

2.2 The *Chairman* put to the meeting the amendments in Temporary Document No. 42/PLEN., to be incorporated into the Report.

The amendments were *approved*.

2.3 *New Recommendations in the R series* (Section 1 of Document AP VII-No. 48)

Adopted.

2.4 *Amendments to existing Recommendations* (Section 2 of Document AP VII-No. 48)

Adopted.

2.5 The *Chairman* noted that the Report of Study Group IX as a whole was thus *adopted*, on the understanding that Recommendation R.111 must be further explained. He paid tribute to the work of Mr. Brown who would no longer serve as Chairman in the forthcoming study period, and thanked the Vice-Chairman and the other members of Study Group IX for the work they had accomplished during the past study period.

3 Report of Study Group X (Documents AP VII-Nos. 38 and 39)

3.1 The *Chairman of Study Group X* (Mr. Daniels, United Kingdom) introduced the Report, noting that the four Recommendations connected with Question 1/X reflected the collaboration between Study Groups VIII and X. All four Recommendations were in final form and any further work on them must be in the nature of a general revision.

Questions 2/X and 3/X were to be merged into a single overall question on signalling. Certain matters such as connect-through procedures and closed user group signalling were of continuing concern; on those matters, too, there was close collaboration between Study Groups VII and X. Four new Recommendations had been prepared on Question 4/X; there had not been time to finalize two of them (U.62 and U.63) to the requisite standard and they would therefore be annexed to the Question, on which continuing study was required.

Study Group X was to annex the relevant definitions for study of Question 5/X since, because of the interaction between Study Groups I and X, two series or at least a suitable system of cross-referencing would have been required; the definitions would thus be immediately available. Because of the interest expressed in the methods of working involved in Questions 6/X and 13/X it had been proposed that those Questions should remain open for further studies.

No contributions directly relating to Study Group X had been received for Questions 9/X and 12/X: it was therefore proposed that they should be terminated.

Of the 11 Questions dealt with by the Study Group, nine were of interest to other Study Groups also, and Study Group X appreciated the collaboration of those Study Groups and of the Secretariat.

3.2 *Draft new Recommendations in the U, F, and S series* (Section 1, Document AP VII-No. 39)

Adopted.

3.3 *Amendments to existing Recommendations U.1 and U.12* (Section 2, Document AP VII-No. 39)

Adopted.

3.4 *Supplements (in accordance with Recommendation U.4)* (Section 3, Document AP VII-No. 39)

It was *agreed* that the three proposals contained in Section 3 should be transformed into Supplements.

3.5 The *Chairman* announced that further definitions were to be annexed to Question 5/X and it was *agreed* that Committee B would examine that proposed annex with a view to approving the list.

3.6 The Report of Study Group X was *adopted*.

3.7 The *Chairman* congratulated the Chairman and all members of Study Group X on the valuable work they had performed during the past study period.

4 Report of Study Group XVII (Documents AP VII-Nos. 43, 44 + Corrigenda 1 and 2)

4.1 The *Chairman of Study Group XVII* (Mr. Vaughan, United States) introduced the Report, indicating that all the meetings of the Study Group and its three Working Parties had been well attended. Twenty existing Recommendations had been revised during the study period and, in twelve cases, the revisions had been provisionally approved under the accelerated procedure. Two draft new Recommendations, V.22 and V.37, had been prepared; he was happy to report that the reservation entered by one Administration in respect of Recommendation V.37 had now been withdrawn. As to the study programme for the coming period, the Study Group's most urgent task would very possibly be to prepare a Recommendation on duplex modems for data signalling rates at and above 2400 bit/s on the switched telephone network; two interim Rapporteurs had already started work in that connection and were making good progress. Mention should also be made of the Study Group's work on interface questions, which had now been reorientated to focus on ISDN interface with customer equipment and in respect of which cooperation would be forthcoming from Study Group XVIII. Finally, he expressed appreciation for the cooperation received from a number of other Study Groups and the CCITT Secretariat, and particularly thanked the Vice-Chairmen of his Study Group, who had served as Chairmen of its Working Parties.

4.2 *Proposed new and revised Series V Recommendations* (Document AP VII-No. 44 + Corrigenda 1 and 2)

4.2.1 *Section 1 – General* (Recommendations V.1-V.6)

4.2.1.1 The *delegate of Senegal*, referring to Recommendation V.2, observed that the value of 50% quoted in preambular § b) had been called in question by Joint Study Group CMBD, whose doubts on the proposed performances were expressed in Document AP VII-No. 114. As a matter of principle, and leaving aside the purely technical aspects of the issue, he considered that it was essential for positions on such matters to be harmonized prior to the Plenary Assembly, in order to avoid confusion during the latter's deliberations.

4.2.1.2 The *representative of the International Telecommunications Satellite Organization (INTELSAT)* considered that the phrase "probably less than 50%", which appeared in preambular § b) of revised Recommendation V.2 was highly ambiguous and would hinder rather than help Administrations and system users.

4.2.1.3 The *Chairman of Joint Study Group CMBD* confirmed that CMBD had serious doubts about the values quoted in the paragraph to which previous speakers had referred. Those doubts had been expressed in a letter which he had sent to Study Groups IX and XVII as well as to Joint Working Party LTG but to which no reply had yet been received.

4.2.1.4 The *Chairman of Study Group XVII* observed that the issue had been debated at considerable length and that the text submitted to the Plenary Assembly represented a rather delicate compromise which had been developed in close cooperation and agreement with Study Group IV and Joint Working Party LTG, and unanimously approved by the Study Group. He drew attention to *Note 1* to Section A of the Recommendation, which went some way towards clarifying the point and removing the ambiguity to which the representative of INTELSAT had referred. Furthermore, *Note 2* to Section B mentioned the possibility of using the levels proposed for leased telephone circuits. He assured delegations that Question 19/XVII concerning power levels for data transmission over telephone-type circuits would be taken up very early in the next study period with a view to publishing further information in the near future.

4.2.1.5 The *Chairman* observed that the schedule of Study Group meetings often made it difficult for Groups dealing with related issues to coordinate their work. If he heard no objection he would take it that the Assembly could agree to adopt Recommendation V.2 on the understanding that it might require modification in the fairly near future as a result of studies to be conducted early in the next study period.

It was so *agreed*.

Section 1 as a whole was *adopted*.

4.2.2 *Section 2 – Interfaces and voice-band modems* (Recommendations V.10, V.11, V.15, V.16, V.19, V.29 and V.31)
Adopted.

4.2.3 *Section 3 – Wideband modem* (Recommendations V.35-V.37)
Adopted.

4.2.4 *Section 4 – Error control* (Recommendations V.40, V.41)
Adopted.

4.2.5 *Section 5 – Transmission quality and maintenance* (Recommendations V.50-V.57)
Adopted.

Document AP VII-No. 44 as a whole was *adopted*.

4.3 *Final Report on the work of Study Group XVII during the period 1977-1980* (Document AP VII-No. 43)

4.3.1 The *Chairman of Study Group XVII* drew attention to the proposed definitions in Annex 2 to the reply to Question 1/XVII which were to be published in the *Yellow Book*. Work on definitions would continue in the next study period, and it was hoped that a set of definitions common to Study Groups VII and XVII could ultimately be developed.

4.3.2 The *Chairman of Study Group VII* endorsed that comment.

The proposed new and revised definitions of terms concerning data transmission were *adopted*, and it was decided to publish them in form of a Recommendation.

4.4 The *representative of the International Organization for Standardization (ISO)* said that cooperation between the Working Parties of Study Group XVII and the ISO Working Groups concerned had been excellent, and that the Chairman of the Study Group and his colleagues were to be congratulated.

4.5 The *Chairman* associated himself with those comments and, on behalf of all present, thanked the Chairman and members of Study Group XVII for their excellent work.

The meeting rose at 18.35 hours.

ANNEX A

Address by the Secretary-General of the African Postal and Telecommunications Union (UAPT)

“Mr. Chairman,

I have the honour and pleasure to greet you on behalf of the member Administrations of UAPT.

There is no need for me to introduce the African Postal and Telecommunications Union to the CCITT Plenary Assembly, since we had the honour of hosting a meeting of the Coordination Committee of the Plan Committee for Africa at our Brazzaville headquarters, a meeting whose importance was enhanced by the active presence of Mr. Mili, Secretary-General of the ITU, and of Mr. Burtz, Director of the CCITT.

The fact that the Brazzaville assembly was preceded by a meeting of the Plan Committee for Africa at Abidjan in the Ivory Coast which is a member of UAPT, testifies to the solicitude we are gratified to receive from the ITU and from the CCITT in particular. I should therefore like to take this opportunity of expressing our warmest gratitude for all that Mr. Mili and his Technical Cooperation Department, and Mr. Burtz and the CCITT Secretariat, are doing at all levels to heighten the interest of the African countries in ITU and CCITT activities. Our Union fully appreciates the solutions which both bodies are helping to find to the many problems of telecommunication development in Africa. It is for this reason that at its last session, held in Dakar, our Council of Ministers expressly recommended that its members make serious preparations for participating in this CCITT Plenary Assembly.

Mr. Chairman,

Allow me to congratulate you on your election to the chairmanship of this Assembly. We feel sure that your renown, combined with your personal qualities, will make for the success of this important meeting in which the developing countries have placed so much hope. With your permission, I should like to recall a few of our hopes, particularly with regard to our views on the structures of the CCITT, the new questions which have been raised, the ITU publications, the participation by developing countries in the work and meetings of the CCIs and, lastly, technical assistance by the CCIs to the developing countries.

As far as the structure of the CCITT is concerned, the General Secretariat considers that it should be strengthened through the creation of posts for a group of engineers which would prepare technical summaries and information notes for instructional purposes.

The structure of the regional Committees should be strengthened and made more dynamic.

1 Administrations should support the proposals put forward at the World Plan Committee meeting on the following:

- planning models for international network planning;
- integrated services digital network;
- coverage of rural areas in the various regions (specific to each region);
- FDM radio relay interconnection;
- feasibility study relating to the creation of a telecommunication industry;
- economic and technical implications of the establishment of a regional satellite network;
- protection of telecommunication plants from external disturbances (lightning);
- practical application of network maintenance and management instructions;
- economic and technical aspects of conversion to digital telecommunication networks.

2 The Recommendations and publications of the CCIs are of special importance, since they define technical standards and methods for the planning, management and operation of telecommunication services, with a view to improving telecommunication networks.

It should be noted that most of these Recommendations are derived from studies and experiments conducted in the industrialized countries and that in many cases no account is taken of data collected in the developing countries, which are unable to provide such information because of a shortage of competent staff.

Consequently, when the Recommendations and publications are received by the Administrations of developing countries they tend to be simply shelved and remain practically unused, partly owing to their technical complexity and partly because the operating staff do not consult them since their conception and presentation make them much more suitable for those who are familiar with the work of the CCI Study Groups.

For the developing countries to benefit from the guidelines issued in such documents, it is necessary that:

- i) those in charge of ITU technical cooperation should systematically
 - keep the developing countries informed of CCI studies and the results obtained,
 - arrange for the CCI Books and Handbooks to contain summaries or preferably publish technical information notes for instructional purposes; the reader would thus be better informed of the results obtained by the Study Groups;
- ii) the Recommendations and publications should be directed towards the practical applications of such studies.

3 Participation of the developing countries in CCI work and meetings

CCI work and meetings are of great importance for the developing countries, since this type of contact and study has a beneficial effect, increasing specialized knowledge in the various fields of telecommunications among these countries' engineers. We note, however, that most telecommunication Administrations of the developing countries do not participate in CCI work. The main reasons are:

- lack of time among the engineers, of whom there are not enough in these Administrations;
- lack of documentation and up-to-date statistical information on their own networks;
- the virtual impossibility of conducting network studies on which a contribution could be based;
- the cost of participation in working parties and other meetings (travel, subsistence allowances);
- the absence of motivation, since it is customarily assumed – for good reason – that the technical secretariats of the CCIs and their traditionally “active” members provide contributions of high quality.

We know that the engineers of the developing countries could take an active part in CCI work and meetings, if they could be made available and had the time for prior thorough study of the documentation provided.

For this reason the ITU Technical Cooperation Department, in conjunction with the CCIs and the regional organizations, should concentrate on the following objectives:

- publication, for the developing countries' Administrations, of the comments and explanations deemed necessary;
- organization of regular information seminars on the status of the work of the CCIs and the progress made with publications;

- setting up of liaison groups in Administrations to act as a nucleus for cooperation with the CCIs;
- financing of the participation of a number of engineers throughout the mandate of the CCITT Study Groups as part of a training policy;
- organization of meetings of certain working parties dealing with specific subjects in the developing countries with a view to stimulating active and large-scale participation by the Administrations of those countries.

4 CCI technical assistance

As we have stated above, to enable the CCITT to provide more effective help to the developing countries in solving their problems, the Plenary Assembly should adopt a Resolution requesting the ITU Administrative Council to make available to the Director of the CCITT the financial and human resources required to attain the objectives set forth above:

- strengthening of the Secretariat by setting up a group of engineers;
- organization of seminars on specific subjects;
- rapid dissemination of synoptic reports by Study Groups;
- creation of a telecommunication research institute.

These, Mr. Chairman, are a few ideas on what the Union and the Member countries expect from the CCITT.

At the same time, we are glad to note that most of these points have been proposed and very similar conclusions drawn by various delegations or by the CCITT Secretariat itself in their relevant documents.

We venture to hope that the combination of so many efforts will lead to greater effectiveness on the part of the CCITT in meeting the concerns of the young countries.

In this respect, we know that we can count on the goodwill of the ITU in supplying all the necessary resources to implement the decisions adopted in our Assembly."

SEVENTH PLENARY MEETING

Tuesday, 18 November 1980, at 08.30 hrs and at 17.45 hrs
Wednesday, 19 November 1980, at 08.30 hrs

Subjects discussed:

- 1 Report of Study Group XI
- 2 Report of Study Group XVIII
- 3 Report of Committee A
- 4 Report of the CMBD
- 5 Draft revision of Recommendation C.1
Draft Recommendation C.2
- 6 Draft Opinion relating to the International Monetary Unit
- 7 Draft Recommendation relating to Coordinated Universal Time (UTC)
- 8 Report of Committee A (continued)

1 Report of Study Group XI (Documents AP VII-Nos. 16, 17, 18, 19, 20, 21, 22, 23, 24 + Corr., 25)

1.1 The *Chairman of Study Group XI* (Mr. Ryan, United States of America) highlighted the main features of the Report on the Study Group's activities during the 1977-1980 study period (Document AP VII-No. 16). In particular, he mentioned the impressive volume of documentation treated by Study Group XI and the record number of participants in its work. He reviewed the situation of the work in connection with the 13 Questions assigned to Study Group XI and the outcome of the studies in the form of Recommendations.

The Study Group had also replied to Questions from Study Groups XVIII, IV, II and the CMBD and had cooperated with the Technical Cooperation Department by providing lecturers for Signalling Seminars held in Jordan and

Singapore. He looked forward to continuing such cooperation and welcomed the extent to which the systems recommended by the Study Group had been brought into use by Administrations.

He had been requested to mention the particular problem of the increasing volume of computer science documentation which gave rise to translation difficulties as the ITU did not have computer specialists in its language services. To take a concrete example, Document AP VII-No. 21 on CHILL was not only very lengthy but also (apart from the Introduction) written in a coded language which was extremely difficult, if not impossible, to translate. The possible solutions were to leave the substantive part of the document in the original "language", attempt to obtain specialized staff for the ITU, or contract the work to a University, for instance.

The Chairman of the Study Group paid special tribute to his two Vice-Chairmen, the Working Party Chairmen and the Special Rapporteurs and thanked the Chairmen of the other Study Groups (VIII, II, GAS 6, among others) with which Study Group XI had been called upon to work. Lastly, he expressed his appreciation to the Director of the CCITT for the valuable assistance of the Specialized Secretariat.

1.2 The *Chairman* in turn thanked the Chairman of Study Group XI for his outline of activities and invited the Assembly to examine the Recommendations produced by that Study Group.

1.3 *Recommendations Q.501 to Q.507 – Digital transit exchanges* (Document AP VII-No. 17)

Adopted.

1.4 *Recommendations in the Q.700 series – Specifications of CCITT common channel Signalling System No. 7* (Document AP VII-No. 18)

Adopted.

1.5 *Recommendations in the Q.600 series – Interworking of signalling systems in SDL presentation, including interworking with the Maritime Mobile-Satellite Service* (Document AP VII-No. 19)

Adopted.

1.6 *Revised and expanded Recommendations Z.101 to Z.105 – CCITT Specification and Description Language (SDL)* (Document AP VII-No. 20)

Adopted.

1.7 *Recommendation Z.200 – CCITT High Level Programming Language (CHILL)* (Document AP VII-No. 21)

1.7.1 The *delegate of France* expressed concern about the risk of possible duplication of effort and expense owing to the rapid advances in the informatics world in which high level languages were being developed in parallel (ADA, for instance, was capable of the same applications as CHILL). Committee B might be requested to consider that aspect.

1.7.2 The *Chairman of Study Group XI* said that there had been some exchange of information and in fact the designers of ADA had been given the specifications of CHILL. It was true that the two languages had been developed along similar lines (and on the basis of studies on many other computer languages) and that on the face of it two such languages seemed unnecessary. However, he felt that the market was large enough to utilize both and he stressed the importance of a telecommunication language controlled by switching specialists.

1.7.3 The *delegate of France* referred to the translation problem raised by the Chairman of Study Group XI and said that he considered that the Study Group had followed the correct course in having the instructions translated into the various working languages and treating the remainder of the document as being written in a coded language. He saw no reason why that course should not continue to be followed.

1.7.4 The *Chairman of Study Group XI* pointed out that necessary translation, in the study period just terminated, had been carried out through the services of an Administration. The problem would no doubt arise again in future because of the highly specialized techniques being studied by the Study Groups.

Recommendation Z.200 was *adopted*.

1.8 *New and revised Recommendations in the Z.300 series – CCITT Man-Machine Language (MML)* (Document AP VII-No. 22)

Adopted.

1.9 *Revisions to Recommendations on Signalling System No. 6* (Document AP VII-No. 23)

Adopted.

1.10 *Revised Recommendations for Signalling System R2* (Document AP VII-No. 24)

Adopted.

1.11 *New Recommendations or amendments to existing Recommendations in the Q series not included in other parts of the Report* (Document AP VII-No. 25)

1.11.1 The *delegate of Brazil* referred to the Section of revised Recommendation Q.7 relating to Signalling System R2. Although his Administration had been unable to participate in all the activities, it had followed certain studies and was conducting its own field strength trials using the R2 system for regional and national circuits with toll-ticketing. The partial results obtained indicated that the statement that the R2 system might be suitable for use on satellite circuits,

especially when it was already employed in the national or regional telephone networks concerned appeared to be incorrect. He therefore proposed that a note be added to the Recommendation to that effect. There was a proposal for the continued study of the Question during the forthcoming study period in Temporary Document No. 13/COM B.

1.11.2 The *Chairman of Study Group XI* pointed out that the studies had indicated that the use of the R2 Signalling System was satisfactory under the conditions stated, and the Study Group could not be expected to know of difficulties in some national networks. He thought the point might best be covered by an addition to the series of Questions, possibly under new Question 18/XI on the updating and improvement of any of the standard systems already specified.

1.11.3 The *delegate of Brazil* thought the text of the Recommendation itself should make clear the conditions under which a particular system could or could not be used for the benefit of Administrations which had not taken part in the studies. As he understood it, Committee B would discuss the matter when examining the proposal in Temporary Document No. 13/COM B.

1.11.4 It was so *agreed*, and on that understanding the Recommendations were *adopted*.

1.12 The *Chairman* asked if there were any general comments on the Report of Study Group XI as a whole.

1.12.1 The *delegate of Lebanon* recalled a contribution submitted to the previous Plenary Assembly requesting the standardization of switching systems. The Chairman of GAS 6 had reported on the work of that Group and, in view of the close collaboration between GAS 6 and Study Group XI, he would welcome some amplification of Study Group XI's progress with respect to the encouragement of such standardization.

1.12.2 The *Chairman of Study Group XI* said that in his introduction he had mentioned that Question 10/XI had an impact on all other Questions. A complete series of Recommendations had just been adopted on digital transit switching and significant progress had been made in the field of digital local switching, without however resulting in many Recommendations. He was confident that studies would continue and lead to Recommendations which would put developing nations in a very favourable position.

He had also mentioned that effort had been concentrated on the new digital systems, rather than on older systems such as crossbar because very little new design effort was being put into the latter. Some of the additions with respect to Signalling System No. 7, the CHILL and SDL areas and in the R2 specifications should also contribute to the standardization of systems in developing countries.

1.12.3 The Report of Study Group XI in Document AP VII-No. 16 was *adopted*.

1.13 The *Chairman* drew attention to a number of comments in the Report concerning the CCITT Book and said that the decisions adopted during the discussion of the Report by the Working Party on the CCITT Book are valid also for Study Group XI.

1.14 The *Chairman* also observed that it was proposed in Section I.4 of the Report to include some Recommendations in Volume VI of the *Yellow Book* as well as in other Volumes, and asked whether the Plenary Assembly approved that proposal.

1.14.1 The *Chairman of Study Group XI* explained that in some cases confusion had arisen following the abolition of former Study Group XIII and the assignment of certain topics to more than one Study Group. Study Group II was responsible for the operational aspects of Recommendation Q.35, for example, and Study Group XI for the technical specifications, and the non-inclusion of the text in Volume VI had caused difficulties. All the Recommendations had been examined very carefully and found essential to the activities of Study Group XI.

1.14.2 The *Chairman* took it that the proposals were *approved*.

1.15 Finally, the Chairman referred to § b) of Section I.4.3 of the Report concerning the International Routing Plan and the proposal to include in Volumes II.2 and VI a brief Recommendation E.171/Q.13.

1.15.1 Following the confirmation by the *Chairman of Study Group II* that the old text of Recommendation E.171 would not appear in any other Volume of the *Yellow Book*, the Assembly *approved* its insertions in the Volumes mentioned.

1.16 The *Chairman* congratulated the Chairman of Study Group XI, his Vice-Chairman and Special Rapporteurs, together with all the members, on the truly imposing amount of work carried out during the study period, for which the Plenary Assembly wished to express its wholehearted gratitude.

2 Report of Study Group XVIII (Documents AP VII-Nos. 101, 102, 103)

2.1 The *Chairman of Study Group XVIII* (Mr. Irmer, Federal Republic of Germany) presented Part I of the Report (Document AP VII-No. 101) containing general information on the meetings held by the Study Group during the period 1977-1980, mentioning the large number of contributions (and delayed contributions) received. A Special Rapporteur had been designated for each Question assigned to the Study Group. Part II of the Report concerned the status of the study of Questions assigned to the Group and was self-explanatory.

Part III (Document AP VII-No. 102) contained the Study Group's proposed amendments to existing Recommendations. In Part IV (Document AP VII-No. 103), the Study Group proposed the addition of new Recommendations in three areas: ISDN and digital networks in general; PCM and digital terminal equipment; and digital

line transmission. He also drew attention to Part V of the Report listing the Questions proposed for study, some redrafted and some new.

In conclusion he emphasized that because the Study Group had only been in existence for a few years all its Recommendations were as yet provisional and their examination was to be continued. Members of the Study Group had participated in Seminars and it was hoped that trend would be encouraged, as digital networks were becoming the subject of increased attention in the developing countries. He concluded his introduction by thanking all the Vice-Chairmen of the Study Group, the eighteen Special Rapporteurs, the Chairmen and Vice-Chairmen of the other Study Groups with which Study Group XVIII had collaborated and the CCITT Secretariat for its devoted assistance throughout the study period. In particular, he wished to thank the Director of the CCITT who had at all times been open to any suggestions made in order to accelerate the work at hand.

2.2 The *Director of the CCIR* drew the delegates' attention to Temporary Document No. 53/PLEN. which contained the comments of CCIR Study Group 4 on various points raised in the Report of Study Group XVIII, which it was hoped the latter would take into account in its future deliberations.

2.3 The *representative of INTELSAT*, referring to Recommendation G.821, observed that Part a) of Table 1/G.821 (error performance objectives for international ISDN connections) contradicted CCIR Recommendation 522, and that Part b) of the same Table was not adequate from the standpoint of satellite systems. Although Note 2 to the Table indicated that the limits proposed therein were subject to review, he wished to draw attention to Sections 2 and 4 of Temporary Document No. 53/PLEN. and proposed an alternative wording for Note 2 to clarify the situation.

2.4 The *Chairman of Study Group XVIII* said he was aware that there was some discrepancy between the contents of Recommendation G.821 and the wishes of those involved in satellite services. However, the Study Group XVIII Report clearly stated that "CCIR Study Group 4 should be asked to consider whether new designs of satellite systems will be capable of achieving the level of performance given in Recommendation G.821". Some of that information had already been received and would be incorporated in further studies. Moreover, Note 2 specified that "the limits proposed are based on the best knowledge currently available..." and it was therefore unnecessary to modify it along the lines suggested by the representative of INTELSAT. He proposed that the text put forward by the latter be annexed to Question B/XVIII which appeared in the list of Questions proposed for the study period 1981-1984.

2.5 The *delegate of Lebanon* supported that proposal.

2.6 The *delegate of the United Kingdom* agreed in principle with the proposal and the suggestion that Section 2 of Temporary Document No. 53/PLEN. be annexed to Question B/XVIII as an even more efficient way of clarifying the points at issue.

2.7 The *Chairman*, observing that Temporary Document No. 53/PLEN. would shortly be examined by Committee B, noted that the appropriate paragraphs therein would be annexed to Question B/XVIII, along with the text proposed by INTELSAT.

It was so agreed.

The Report of Study Group XVIII was adopted.

3 Report of Committee A (Temporary Document No. 60/PLEN.)

3.1 The *Chairman of Committee A* (Mr. Bastikar, Canada) drew the Assembly's attention to the various proposals contained in the Report in Temporary Document No. 60/PLEN.

3.2 Section 1 – Organization of Study Groups

3.2.1 After discussion, the organization proposed was *adopted in principle*. The Chairman of Committee A was requested to try to improve the titles of the new Study Groups.

It was so agreed.

3.2.2 The *Chairman of Committee A* noted that the number of Vice-Chairmen to be assigned to the new Study Groups would be discussed at the meeting of Heads of delegations.

Section 1 of the Report, with those explanations and amendments, was *approved*.

3.3 Section 2 – Organization of studies on ISDN

3.3.1 The *delegate of the United Kingdom* proposed that the last sentence of the first paragraph should be amended to read as follows:

"As in the previous study period, it is proposed that Study Group XVIII would be responsible for coordination of the studies of a number of Study Groups concerned with integrated services digital networks."

It was so agreed.

Section 2 of the Report as amended was *approved*.

The meeting was adjourned at 11.05 hours and resumed at 17.45 hours.

4 Report of CMBD (Documents AP VII-Nos. 59, 114; Temporary Document No. 27)

4.1 The *Chairman of the CMBD* (Mr. Bolle, Netherlands) reviewed the principal results of the CCITT/CCIR Joint Study Group CMBD (Documents AP VII-Nos. 59 and 114). The Questions assigned to the CMBD fell into two categories: noise, overload level and other topics relating to the quality of circuits, and reliability, availability, maintainability, etc. Although the number of Questions studied was limited, they were of such a fundamental and scientific nature that the work was extensive. Unfortunately, many documents had been sent in too late to be considered by the various Special Rapporteurs while, on the other hand, some of the Special Rapporteurs had not been able to make sufficient time available for the work which was required of them. With regard to the list of Special Rapporteurs contained in Part A of the Report, he noted that he himself had replaced Mr. Pfyffer as Special Rapporteur for the purification of the G.100 Series Recommendations.

He went on to review the replies to the Questions studied during the 1977-1980 study period (Part B) drawing particular attention to Question 1/CMBD concerning the loading of carrier systems. The CMBD was most concerned about the proposed levels for non-speech application with a level of -13 dBm0 simultaneously in both directions of transmission. Its concern had been reflected in a letter to Study Groups IX and XVII, as well as to JWP/LTG. He sincerely hoped that Study Group XVII, in its study of Question 19/XVII would take into account the concern of CMBD. The level proposed in Recommendation V.2 would be of great consequence for various transmission systems, as the representative of INTELSAT has pointed out at the Sixth Plenary Meeting. In conclusion, he thanked the Chairmen of the two Working Parties and the Directors and Secretariats of the CCITT and CCIR for their contribution to the work of the CMBD during the period 1977-1980.

4.2 The *delegate of the U.S.S.R.* drew attention to the Note which it was proposed to insert in Recommendation G.222 which read "It is the firm intention of the CCITT to delete Clause 1.1 of Recommendation G.222...". He considered that, as worded at present, the Note tended to prejudge the findings of any subsequent examination of the issue.

4.3 The *Chairman of the CMBD* said that the wording of the Note could perhaps be modified to meet the objection of the delegate of the U.S.S.R.

4.4 The *Director of the CCIR* informed the delegates that the IEC/CCI Joint Group on Vocabulary was developing an extensive vocabulary on reliability, failure and interruptions. The Secretariat of the CMV had brought the terms to the attention of the Joint Group so that they could be taken into account in preparing that vocabulary.

4.5 The *Chairman* informed the delegates that Questions E/CMBD and F/CMBD (Document AP VII-No. 114, pages 4 and 5) had been withdrawn and would not be taken into consideration by Committee B.

4.6 Amended Recommendations G.101, G.212, G.222, G.223, G.230 and Supplement No. 5 to Volume III, were *adopted*.

4.7 Draft new Recommendations G.106 (and Annex), G.215, H.16 (Section C) and Supplement No. 22 to Recommendation G.233 were *adopted*.

4.8 The Report of Joint Study Group CMBD (Document AP VII-No. 59, as corrected by Temporary Document No. 27/PLEN.) was *adopted*.

5 Draft revision of Recommendation C.1; draft Recommendation C.2 (Document AP VII-No. 108 + Corr.)

5.1 The *Chairman of GAS 5* (Mr. Longequeue, France) drew attention to a number of minor modifications that were proposed to Recommendations C.1 and to draft new Recommendation C.2.

5.2 The *delegate of the United Kingdom* proposed that the date for providing statistical data referred to in § 4 of Recommendation C.1 be changed from 1 July to 1 September.

It was so *agreed*.

The draft revision of Recommendation C.1 was *adopted*.

5.3 The *delegate of Italy* said that, although he appreciated the reasons behind draft Recommendation C.2, he did not believe that the raw statistical data that might be collected by means of the proposed questionnaire on national tariffs would be of any significant use.

5.4 The *delegate of Canada* agreed that the analysis of such a mass of raw data would be an enormous task for the CCITT.

5.5 The *delegate of Senegal* suggested that, if draft Recommendation C.2 did not meet with the approval of the majority of the Plenary Assembly, then the matter should at least be referred to the Regional Tariff Groups.

5.6 The *delegate of Japan* reserved the position of his delegation on the matter.

5.7 The *Chairman* proposed that draft Recommendation C.2 be referred to Study Group III to be examined in conjunction with the Regional Tariff Groups.

It was so *agreed*.

6 Draft Opinion relating to the International Monetary Unit (Document AP VII-No. 68; Temporary Document No. 55/PLEN.)

The revised draft Opinion contained in Temporary Document No. 55/PLEN. was *adopted*.

7 Draft Recommendation relating to Coordinated Universal Time (UTC) (Temporary Document No. 44/PLEN.)

7.1 The *Director of the CCIR* noted that paragraph f) of the draft Recommendation should read “that according to *CCIR* Recommendation 536...”.

The draft Recommendation relating to the use of the term UTC was *adopted*.

The meeting was adjourned at 18.55 hours and resumed on Wednesday, 18 November, at 08.30 hours.

8 Report of Committee A (discussion continued) (Temporary Document No. 60/PLEN.)

8.1 *Section 3 – Evolution of Study Group structures*

8.1.1 The *delegate of Spain* referred to § 2, c) of the Report by Working Party COM A/1 (Temporary Document No. 29/COM A) which stated that the Spanish delegation had decided to adopt the terms “redes digitales”; he wished to make it clear to the other Spanish-speaking delegations that that had merely been a suggestion on the part of his delegation.

Approved.

8.2 *Section 4 – Work on terminology*

8.2.1 The *Chairman* referred delegates to Temporary Document No. 30/COM A submitted by a small Working Group of Commission A which had not been discussed by Committee A.

8.2.2 The *Chairman of that Working Group* pointed out a correction to be made to the French version of point 2 under Conclusion and Recommendations, where the last line should read: “... qui doivent être *identifiés* dans le VEI”.

8.2.3 The *Chairman of CMV* agreed to the amendments proposed but thought the wording of point 3 was rather rigid.

8.2.4 Following an exchange of views between the *Chairman of GAS 3*, the *Chairman*, the *Chairman of the Working Group* and the *Chairman of CMV*, it was *agreed* to adopt the drafting: “Before each decision concerning the terminology work of the Study Group, the Special Rapporteur will consult his Study Group.” for the proposed Note to § A.1.4 of Annex A of Recommendation A.10.

8.2.5 The introductory note of explanation for the part of the *Yellow Book* dealing with series A Recommendations was *adopted*.

8.2.6 The *Chairman of CMV* said he wished to make a general statement about terminology work. The text of Resolution No. 66 prepared by the CMV (representing both CCIs) in January 1978 had been adopted by the CCIR Plenary Assembly in June 1978 and then distributed to the Chairmen of CCITT Study Groups at their meeting in October of that year. It was then distributed to Administrations, Special Rapporteurs and Terminology Rapporteurs with a Circular from the Director of the CCITT announcing a meeting of CMV in June 1980. It was indicated that Resolution No. 66 would be used as a basis for the revision of CCITT Recommendation A.10. Some representatives of the CCITT had duly attended the CMV meeting but apparently that representation had been inadequate, as further additions had had to be made to the Recommendation by the current Plenary Assembly.

He urged, therefore, a more active participation of the CCITT in future CMV meetings to ensure that all views were expressed. CMV was due to meet again in October 1981 and the CCIR Secretariat was asking for contributions by June 1981. He warmly invited all those interested to send in contributions and attend as delegates.

8.3 *Section 5 – Coordination with organizations outside the ITU*

8.3.1 The *Chairman of Working Party COM A/1* proposed a re-wording of the Section as follows:

“The Committee considers it appropriate to recommend the Plenary to urge Administrations to carry out a thorough examination of the issues related to this topic during the coming study period with a view to proposing any necessary changes to the VIIIth Plenary Assembly.”

That revision was *approved*.

8.3.2 At the suggestion of the *Director of the CCITT*, it was *decided* that the substance of the Section would be embodied in an Opinion.

8.3.3 The *Chairman* drew attention to Temporary Document No. 31/COM A in which the representative of the ISO requested a modification to a statement in the summary of discussions of the fourth meeting of Working Party COM A/1 (Temporary Document No. 29/COM A).

8.3.4 The *Chairman of Working Party COM A/1* agreed to incorporate that amendment. He felt it would be useful for the summary of his Working Party’s discussions to be published as part of the overall Report of Committee A and would welcome the opportunity, if the Plenary so decided, to make a number of editorial amendments in the documents concerned.

8.3.5 It was so *agreed*.

8.3.6 The *representative of ISO* pointed out that the discussions on Recommendations A.20 and A.21, to which his statement had referred, should have been covered in Section 5 of Committee A's Report, and not in Section 4. Furthermore, the statement that "... the revised text of Recommendation A.20 as contained in Document AP VII-No. 6" was not amended was incorrect, as the text had in fact been revised in the course of discussion on Study Group VII Recommendations.

8.3.7 The *Chairman of Committee A* said he had examined that point with the Chairman of Study Group VII and the necessary corrections would be made.

Section 5, as amended, was *approved*.

8.4 *Section 6 – Revision of Resolution No. 1*

8.4.1 The *Chairman* invited the Assembly to refer to the Report of Working Party COM A/2 in Temporary Document No. 28/COM A. He took it that that Report also would be annexed to the Report of Committee A.

It was so *agreed*.

8.4.2 The *Chairman of Working Party COM A/1* pointed out that the Committee A Report did not include all points discussed in his Working Party, and wondered whether the annexing of the Reports would be sufficient or whether the text of the Committee A Report should be amplified. No mention was made, for instance, of several matters of coordination between the CCITT and the CCIR.

8.4.3 The *Chairman* considered that there was no need to add further comments in the Report of Committee A itself, as delegates would have available the complete records of the Working Party discussions.

8.4.4 The *delegate of Italy* pointed out that Temporary Document No. 60/PLEN. did not reflect accurately the discussions with regard to the term "Working Party". The proposed footnote was not to be used throughout Resolution No. 1, but only in some parts of the Section I (Plenary Assembly).

8.4.5 The *Director of the CCITT* proposed that that point should be dealt with by the Editorial Committee.

It was so *agreed*.

8.4.6 The *Chairman of the Editorial Committee* said that Resolution No. 1 contained errors not only of form but of substance. Over the years, it had been amended piecemeal, the quality of the drafting had suffered in the process and there were divergencies between the three language versions, the French text not necessarily being authentic. The Editorial Committee would certainly take account of the comments by the delegate of Italy, but in the long term consideration should be given to an in-depth review of the Resolution.

8.4.7 The *Chairman of Working Party COM A/2* fully agreed with that view. He noted that Section 5 of his Working Party's Report mentioned a proposal to divide the Resolution into three separate texts, for example. The Working Party had been aware of the problem but could not tackle the necessary revision in two days. Perhaps an updated version could be submitted to the VIIIth Plenary Assembly.

8.4.8 The *Chairman* proposed that the Director of the CCITT produce a text for consideration at the following Assembly.

8.4.9 The *delegate of the United Kingdom* endorsed that proposal. The sense of the required modifications was quite clear and it was appropriate for the Director and the Secretariat to submit such proposals. If consultations were necessary, the members of the present Editorial Committee might be asked for advice.

It was so *decided*.

8.4.10 The *delegate of Spain* said there was an omission in the text of Resolution No. 1 in Section I, §1, d); the final sentence should refer to "international organizations and regional telecommunication organizations" to be consistent with the first sentence of the paragraph.

8.4.11 The *Chairman* invited comments on the various Sections of Resolution No. 1, in conjunction with the proposals in Temporary Document No. 28/COM A.

8.4.12 The *delegate of France*, referring to § 2.7.1 of that document, asked that the instructions to restrict to the minimum the number of copies of documents sent to Administrations and RPOAs be applied with some flexibility.

8.4.13 The *Director of the CCITT* said that he had thought that that was understood, but to cover the point, the words "in principle" would be added.

It was so *agreed*.

8.4.14 The *delegate of the United Kingdom* said that in § g) the words: "Non-standard documents" of Section III. 4 (Processing of contributions) of Resolution No. 1 as reproduced in Temporary Document No. 28/COM A should be deleted.

8.4.15 The *delegate of France* said that in § d) of Section III. 9 (Preparation of reports, Recommendations and new Questions) the phrase in parentheses should be deleted.

The text was *approved*, as amended.

8.5 *Section 7 – Amendments of Resolution No. 2*

Approved.

8.6 *Amendments of Opinion No. 3*

Approved.

8.7 The *Chairman* asked the Chairman of Committee A to announce the titles for the new Study Groups agreed upon as a result of consultation.

The *Chairman of Committee A* proposed that the titles of Study Groups should be "Definitions and operational aspects of telegraph and telematic services (facsimile, Teletex, Videotex, etc.)" and for Joint Study Group VIII/XIV "Terminal equipment for telematic services (facsimile, Teletex, Videotex, etc.)"

The *delegate of United Kingdom* supported by the *delegate of Spain*, proposed that the Note corresponding to the asterisk in the title should read: "The term "telematic services" is used provisionally".

Those titles were *adopted*.

8.8 The Report of Committee A (and the Reports of Working Parties COM A/1 and COM A/2), as amended, were *adopted*.

8.9 The *Chairman of Committee A* thanked the Chairman of the Plenary Assembly for the honour paid to him in electing him to the office of Chairman and hoped that the work of his Committee had been satisfactory. The credit was due for the most part to his two Vice-Chairmen, to the participants, and to the Senior Councillor of the CCITT.

The meeting rose at 10.00 hours.

EIGHTH PLENARY MEETING

Thursday, 20 November 1980, at 16.40 hrs

Subjects discussed:

- 1 Report of Working Group on "Opinion No. 9"
- 2 Report of Committee B
- 3 Questions relative to tariffs submitted by UNESCO

1 Report of Working Group on "Opinion No. 9" (Temporary Document No. 62/PLEN.)

1.1 The *Chairman of the Working Group on "Opinion No. 9"* introduced the document, pointing out that the words "its work" in the second line of the fourth paragraph should be replaced by "the CCITT". He drew special attention to the unanimous decision, reached after much discussion, that very few changes could be made in the terms of reference of the CCITT appearing in Opinion No. 9 of the *Orange Book*, in view of the continuing difficulty of defining the term "telegraphy"; in particular, it had not been considered appropriate to use the term "telematic services".

1.2 The *delegate of France* said that, while his delegation to the Working Group had accepted the general view that no basic change could be made in the terms of reference of the CCITT for the time being, it considered that those terms of reference should in principle look to the future rather than to the past in defining and protecting the areas of activity and that the term "telematic", although not yet defined, was broad enough to provide the necessary protection.

Temporary Document No. 62/PLEN., as amended, was *adopted*.

1.3 The *Chairman* thanked the Working Group and its Chairman for the useful work done.

2 Report of Committee B (Temporary Documents Nos. 68/PLEN., 73/PLEN., 74/PLEN., 75/PLEN.; 3/COM B, 5/COM B, 10/COM B, 11/COM B, 13/COM B, 16/COM B, 17/COM B, 21/COM B, 24/COM B, 26/COM B, 30/COM B, 32/COM B, 33/COM B, 34/COM B, 35/COM B; 19/COM A (Rev. 1); 21/COM D)

2.1 The *Chairman of Committee B* said that the main part of the report appeared in Temporary Documents Nos. 68/PLEN., 73/PLEN. and 74/PLEN., but that he would be obliged to refer the Assembly to a number of Temporary Documents of Committee B, because there had not been time to collate all the texts. Temporary Document No. 75/PLEN. had not been considered in Committee B because the relevant material had not yet been received from Committee D; that document should be examined in conjunction with Temporary Document No. 21/COM D. Some of the Temporary Documents contained proposals for new Questions: the procedure of submitting such proposals at the last moment should be discouraged, since much time was wasted in discussing the texts and redrafting them in proper form. The lists of Study Group Questions were reproduced in the order on which they had been examined, which was the order in which the reports had been submitted to the Plenary Assembly; they would, of course, ultimately be printed in numerical order.

2.2 Temporary Document No. 74/PLEN., as amended, was *adopted*.

2.3 Questions (Temporary Documents Nos. 68/PLEN., 73/PLEN.)

2.3.1 Study Group XII

2.3.1.1 The *Chairman of Committee B* said that a note should be added indicating that Study Group XII was called upon to produce a Handbook on "Voice-ear measurements" (Temporary Document No. 75/PLEN.).

2.3.1.2 The *Chairman of Study Group II* observed that the document in question also listed publications to be prepared by Study Groups II, IV and XV. The Study Groups concerned should be given formal terms of reference for that purpose.

2.3.1.3 After a brief discussion, the *Chairman* proposed that each of the Study Groups should be assigned a brief Question stating that a publication was to be prepared and that those Questions should be amplified later in the light of the results of the work of Committee D. The Questions will state also that the Commissions are responsible for the choice of subject of different chapters and of the methods of work.

It was so *decided*.

The Questions of Study Group XII were *adopted*.

2.3.2 Study Group IV

The Questions of Study Group IV were *adopted*.

2.3.3 Study Group V

2.3.3.1 The *delegate of Canada*, referring to the first amendment to Question 2/V, said it should read "Replace 'interference' in the title *and text* by 'unwanted'".

2.3.3.2 The *Chairman of Committee B* said that the reference to Question 22/V as an urgent Question should be deleted, since it had been decided in Committee B merely to append to it the Note which appeared in Temporary Document No. 24/COM B and which should be amended by inserting the word "new" before "contributions" in the second line and the word "additional" before "information" in the third line and adding the phrase "before the final meetings in September-October 1981" at the end of the Note.

The Assembly decided that this Note, which would be useful only at the beginning of the study period, not be appended to the Question, but its content would be incorporated in a circular of the Chairman, sent around at the very beginning of the study period (at the same time as Contribution No. 1, containing the Questions).

All the information so far collected by Study Group V, especially the "Handbook on protection against lightning" published in 1974 and 1978, had been communicated to the CCIR Secretariat and it was important that that information should be available to Study Groups 3, 9 and 10.

The Questions of Study Group V, as amended, were *adopted*, on the understanding that the last paragraph of the statement of the Chairman of Committee B concerning the "Handbook on protection against lightning", would be communicated to the CCIR.

2.3.4 Study Group VI

The Questions of Study Group VI were *adopted*.

2.3.5 Study Group II

The Questions of Study Group II were *adopted*.

2.3.6 Study Group III

The Questions of Study Group III were *adopted*.

2.3.7 Study Group I

2.3.7.1 The *Chairman of Study Group I* said that the title of Question 1/I should be amended to read "Quality of service objectives applicable to the services under study" and that the parentheses round the word "telematic" should be removed against Questions 7/I and 21/I.

2.3.7.2 The *delegate of the United States of America* pointed out that it had been decided in Committee B to put an asterisk against the word "telematic" with a footnote indicating that the term was provisional.

2.3.7.3 The *Chairman of Committee B* said that a similar footnote might perhaps be appended to the title of Question 20/I.

2.3.7.4 The *delegate of the United Kingdom* said that, although his delegation had no objection to the wording used in Temporary Document No. 34/COM B, he wanted it to be recorded that the term "telewriting" was rather close to one used as a proprietary description in the United Kingdom.

The Questions of Study Group I, as amended, were *adopted*.

2.3.8 Joint Working Party SMM

The Questions of Joint Study Group SMM were *adopted*.

2.3.9 Study Group XVI

The Questions of Study Group XVI were *adopted*.

2.3.10 Joint Study Group CMTT

The Questions of Joint Study Group CMTT, as given in CCIR Volume XII and Temporary Document No. 16/COM B, were *adopted*.

2.3.11 *Study Group VII*

The Questions of Study Group VII were *adopted*.

2.3.12 *Study Group XI*

The Questions of Study Group XI were *adopted*, subject to an editorial amendment to the French text.

2.3.13 *Merged Study Groups VIII and XIV*

2.3.13.1 The *delegate of the United States of America* drew attention to new Question 25/VIII in the Annex to Temporary Document No. 73/PLEN. and indicated that the word "service" in *considering* (b) should be replaced by "terminal" and that the words "and procedures" in operative paragraph (a) should be deleted.

2.3.13.2 The *delegate of the Federal Republic of Germany* said that the study of Teletex procedures was implicit in the Question. It was therefore immaterial whether or not the words "and procedures" were retained.

2.3.13.3 The *Chairman of Committee B* suggested that the proposed amendments might be accepted, subject to the inclusion in the Question of a note to the effect that its study entailed a study of Teletex procedures.

It was so *agreed*.

2.3.13.4 After a brief discussion, it was *decided* to amend the last line of Question 14/VIII to read "... and Teletex (broadcast videography)".

The Questions of Merged Study Groups VIII/XIV, as amended, were *adopted*.

2.3.14 *Merged Study Groups IX/X*

The Questions of Merged Study Groups IX/X were *adopted*.

2.3.15 *Study Group XVII*

The Questions of Study Group XVII were *adopted*, subject to an editorial amendment to the English text.

2.3.16 *Study Group XV*

2.3.16.1 The *Chairman of Committee B* drew attention to the fact that Question A/N was retained in the Study Programme of Study Group XVIII for the period 1981-1984 but would be addressed to Study Group XV for the subsequent study period.

The Questions of Study Group XV were *adopted*.

2.3.17 *Study Group XVIII*

2.3.17.1 The *Chairman of Committee B* noted that Temporary Document No. 73/PLEN. should read: "Question AB has *not* been included in the Study Programme". He also observed that all Questions on ISDN and Question R/XVIII were to be considered urgent.

The Questions of Study Group XVIII were *adopted*.

2.3.18 *Joint Study Group CMBD*

The Questions of Joint Study Group CMBD were *adopted*.

2.3.19 *Joint Study Group CMV*

The Questions of Joint Study Group CMV were *adopted*.

2.3.20 *Joint Working Party LTG*

The Questions of Joint Working Party LTG were *adopted*.

2.4 *Handbooks* (Temporary Document No. 75/PLEN.)

2.4.1 The *Chairman of Committee B* drew attention to the handbooks to be prepared by the Study Groups and Special Autonomous Groups.

2.4.2 The *Director of the CCITT* observed that although GAS 5 had been studying statistics, the subject involved the drafting of a Recommendation (C.I), and should be rightly allocated to Study Group III or to the World Plan Committee.

2.4.3 The *Senior Councillor* said that the responsibility for statistics properly belonged to the World Plan Committee but that, if the statistics compiled so far were to remain coherent for a reasonable length of time, the incorporation of new items in Recommendation C.I must be temporarily frozen.

It was so *agreed*.

2.4.4 The *Chairman of Committee B* concluded his presentation of the Questions for study by thanking delegations, the Chairmen and Vice-Chairmen of Study Groups and all the staff who had contributed to the successful completion of Committee B's work.

2.4.5 The *Chairman* said that thanks were due first and foremost to the Chairman of Committee B himself.

3 Questions relating to tariffs submitted by UNESCO (Temporary Documents Nos. 7/PLEN. and 51/PLEN., 20/COM B)

3.1 The *Director of the CCITT* withdrew Temporary Document No. 7/PLEN. (containing a draft Question which did not conform to CCITT practice) explaining that it had been published because the General Conference of UNESCO, meeting in Belgrade in October, had endorsed the proposals of its Working Group on International Telecommunication Tariff Structure, but that the document was now superseded by Temporary Document No. 51/PLEN.

3.2 The *Secretary-General* introduced Temporary Document No. 51/PLEN. and pointed out that the Resolution in Annex I had not yet been communicated to him officially by the Director-General of UNESCO. When that was done, he would communicate it to the members of the Administrative Council, as it was that body which was authorized to give instructions in such cases. The Administrative Council was aware of UNESCO's concern and its realization that a telecommunication infrastructure was essential for the development of the activities of the press and broadcasting media. The ITU had tried, to the extent feasible, to take part in all meetings where telecommunications matters were discussed and where there was a danger of UNESCO encroaching upon the field of activity of the ITU. The ITU was playing an active role in promoting the development of such an infrastructure and had attended many meetings, including regional meetings in Asia, Africa and Latin America at which the General Conference was prepared, emphasizing at all times the fact that in tariff matters Governments were sovereign and that the granting of special reduced rates was a matter upon which Governments alone could take a decision. He also pointed out that there was a vital need for coordination on the national level if the activities of the international organizations were to be effective.

3.3 The *delegate of Senegal* supported the proposal for study of a Question, as proposed by UNESCO, and described the action already being taken in the African continent to take account of the needs of the press, radio and television and other organizations.

3.4 The *delegates of Guinea and Togo* also supported the adoption of a Question for Study by the CCITT.

3.5 The *delegate of Cuba* and the *delegate of Algeria* both emphasized the importance of the subject and thought that the CCITT could usefully contribute by studying the question of possible special tariffs for the information media. They therefore requested the Director of the CCITT to enter a Question in the Work Programme of Study Group III for the forthcoming study period.

3.6 The *delegate of Australia* pointed out that the Question in Temporary Document No. 51/PLEN. concerned subsidization of a particular class of telecommunication users, and as such was a matter of Government policy, as the CCITT was a standard-setting body and its basic role was to make international telecommunication possible by setting standards which would ensure that networks were compatible. The substance of the Resolution therefore lay outside the CCITT's terms of reference. The subject was already receiving close attention in other forums, in which Australia was taking part, and duplication of those studies in the CCITT was an inefficient use of scarce resources.

The delegation of Australia therefore opposed the adoption by the CCITT of a Question for examination in one of its Study Groups.

3.7 The *delegate of the Netherlands* recognized that the free flow of information was very important and that every effort should be made to facilitate it. Many international bodies were considering the subject and the CCITT was involved because of its technical Recommendations for the establishment of worldwide telecommunication systems, including the operational and organizational aspects. Unfortunately, his Administration could not discuss the subject for the moment as there had not been time to consider the issue nationally before coming to the Plenary Assembly. The setting of tariffs was based on Government decisions. His Administration therefore endorsed the action described by the Secretary-General and the pursuit of discussions and collaboration on the highest administrative level.

3.8 The *delegate of the Federal Republic of Germany* agreed with the two previous speakers that the subject was of great importance but that decisions had to be taken at Government level. For that reason, the procedure described by the Secretary-General represented the only solution.

The latter should therefore inform the Administrative Council as soon as the Resolution was forwarded to him officially from UNESCO and the Administrative Council would then take action. According to No. 308 of the Convention, the Council was authorized to refer a Question to the CCITT for study, if it thought fit.

3.9 That view was supported by the *delegates of Brazil, Japan, the United States and Canada*, who reiterated that decisions on tariffs could only be taken by sovereign Governments and therefore lay outside the terms of reference of the CCITT. The *delegate of Spain* added that before any decision could be taken on whether or not to study a Question, the Report of the UNESCO Working Group would have to be analysed and more information sought, as it was not clear exactly what UNESCO expected from the ITU.

3.10 The *delegate of Senegal* pointed out that the principle of national sovereignty in the matter of tariffs was not contested. For that matter, none of the CCITT Recommendations could be imposed. It was simply a matter of Study Group III being asked to produce guidelines which would assist Administrations or regional organizations.

3.11 The *Chairman* put forward a compromise proposal to the effect that the Plenary Assembly take note with interest of the UNESCO Resolution, that in principle it was not opposed to the study of a Question on the subject, on condition that it would be restricted to guidelines of an international character and be worded in line with the mandate of the CCITT, and that Study Group III should draft a suitable Question for approval by Administrations by correspondence.

3.12 That proposal was supported by the *delegates of Senegal and Cuba*.

3.13 The *delegate of Italy* said that it was pointless to entrust Study Group III with studies, if there was no hope of a positive solution. The only possible output was a Recommendation, but it was well known that tariffs in developing countries were always established between the countries concerned under Government approval. He quoted the example of a company in Italy which had been created precisely to make such favourable arrangements.

3.14 The *Director of the CCITT* thought that that was exactly the sort of information which was required and of which all countries were not perhaps aware. It was understood of course that the CCITT could not itself impose tariffs. He supported the proposal by the Chairman.

3.15 The *Chairman of Study Group III*, while recognizing the importance of the subject, did not see how his Study Group could tackle the Question as worded, as it did not conform to the guidelines for new Questions set out in CCITT Opinion No. 3. He would propose that UNESCO be requested to submit a draft Question which complied with the usual format in the early stage of the forthcoming study period, and it would then be submitted for approval under the normal procedure described in Article 58 of the Convention.

3.16 The *delegate of Denmark* pointed out that the Assembly had already heard representatives from large user groups and organizations asking for special treatment and he thought that such requests for reduced tariffs should be handled with caution. He did not think that in the circumstances Study Group III would be able to deal satisfactorily with such a Question. He therefore endorsed the procedure suggested by the Secretary-General whereby Administrations would be informed of the UNESCO Resolution; if some of those Administrations wished to introduce new study Questions they could do so in the normal way.

3.17 The *delegate of Lebanon* pointed out that the majority of delegations present at the UNESCO Conference would already have informed their respective Governments of the outcome and PTT Administrations would be aware of the situation. Assistance in the form of CCITT studies or a Recommendation might be useful to them. He therefore supported the proposal put forward by the Chairman.

3.18 The *delegate of Australia* said that he was unable to support that proposal, and the only compromise acceptable was that suggested by the delegate of the Federal Republic of Germany which put the onus of decision on to the Administrative Council. The assumption that national Governments would be bound to offer preferential rates to a particular class of user on the basis of CCITT studies or even a Recommendation was totally erroneous and in his view any efforts in that direction would be counter-productive.

3.19 The *delegate of the United Kingdom* said that, as it stood, the text of the Question could only lead Study Group III into difficulties and he was entirely in sympathy with the points mentioned by the delegates of Australia and Denmark. The solution he preferred, therefore, was that made by the delegate of the Federal Republic of Germany.

3.20 The *Chairman* said that he observed a wide measure of support for the proposal by the delegate of the Federal Republic of Germany, which was therefore considered as *adopted*.

The meeting rose at 20.15 hours.

NINTH AND LAST PLENARY MEETING

Friday, 21 November 1980, at 09.30 hrs and at 14.30 hrs

Subjects discussed:

- 1 Statement by the delegation of Venezuela
- 2 Reservations expressed by the delegation of Canada concerning Recommendation A.21
- 3 Report of the Working Group on the CCITT Book
- 4 Approval of the minutes of the inaugural meeting and of the first, second, third, fourth, fifth and sixth Plenary meetings
- 5 Report of Committee C
- 6 Report of Committee D
- 7 Report of the Editorial Committee
- 8 Final approval of Documents AP VII-Nos. 71 and 69
- 9 Appointment of Chairmen and Vice-Chairmen of Study Groups, Plan Committees, Joint Working Parties and Special Autonomous Groups set up by the VIIth Plenary Assembly
- 10 Dates and place of the VIIIth Plenary Assembly
- 11 Schedule and holding of CCITT meetings (1981-1984)
- 12 Terms of reference of GAS 8

- 13 Texts of new Questions relating to the drafting of Handbooks and other texts
- 14 Numbering of merged Study Groups
- 15 Approval of Temporary Document No. 63/PLEN.

1 Statement by the delegation of Venezuela

- 1.1 The *delegate of Venezuela* delivered the statement reproduced in the Annex A.

2 Reservations expressed by the delegation of Canada concerning Recommendation A.21

- 2.1 The *delegate of Canada* said that his delegation had some reservations to make concerning Recommendation A.21. Canada's opinion on the matter was expressed in the part of Document AP VII-No. 33 relating to international organizations.

3 Report of the Working Group on the CCITT Book (Temporary Documents Nos. 41/PLEN. + Corr. 1 and 2, 58/PLEN., 67/PLEN., 69/PLEN.)

- 3.1 The *Chairman* read out the conclusion of the Working Group on the CCITT Book on parallel page numbering (Temporary Document No. 67/PLEN.), pointing out that all other matters concerning the *Yellow Book* had already been settled.

3.2 The *Director of the CCITT* observed that parallel page numbering had been used for a long time and without any difficulties for the CCITT Books. In his view, there was no argument to justify the adoption of any other numbering system. The decisions of the Administrative Council on the matter related to the ordinary budget and to Study Group contributions and therefore did not concern the CCITT Book, which was covered by the budget for publications sold by the ITU. Moreover, the CCITT had conducted a study showing that parallel page numbering had undoubted economic advantages. The practical aspect of the problem must also be taken into account, since the aim must be to facilitate consultation of the Book and to avoid confusion for the user. In conclusion, the preparation of the new CCITT Book had already begun, and any change would lead to regrettable delay.

3.3 The *delegate of the Federal Republic of Germany* proposed a compromise solution which would involve no extra cost and which consisted in using a marginal numbering system similar to that of the ITU Convention.

3.4 The *Secretary-General* supported that proposal, which seemed to be legally and practically acceptable, and drew attention to Temporary Document No. 58/PLEN., § 3.5.

3.5 The *Director of the CCITT* said he objected to that solution and reiterated the arguments he had already advanced. A study of the problem might perhaps be submitted to the VIIIth Plenary Assembly.

3.6 The *delegate of Algeria*, supported by the *delegates of Morocco* and *Denmark*, said that the essential point for Administrations was that the Book should be published as soon as possible.

3.7 The *delegate of Spain* said it would be difficult to reach agreement on the legal interpretation of provisions on the Convention relating to publications. The economic and practical aspects were also important. In the case at issue, his delegation was in favour of maintaining parallel page numbering.

3.8 The *delegate of France* said that the question was simply one of common sense. He therefore supported the proposal of the Director of the CCITT.

3.9 The *Chairman*, summarizing the views expressed, stressed that the choice of a solution depended mainly on the "cost" and "publication time" factors, which should be reduced as far as possible. In that context and according to considerations advanced with regard to the cost and publication time factors, which seemed at that stage of the preparation of the Book to be in favour of parallel page numbering, there was no justification for departing from the existing solution: that of parallel page numbering, which was, moreover, operationally preferable. At that stage of the discussion and in the absence of other arguments, the best solution therefore seemed to be to retain parallel page numbering. The Administrative Council's decision related only to the ordinary budget of the Union and did not seem to preclude the adoption of such a solution. He also proposed that the draft Opinion appearing in Temporary Document No. 69/PLEN. be transmitted to the Administrative Council, so that the problem of page numbering could be finally settled.

It was so *decided*.

4 Approval of the minutes of the inaugural meeting and of the first, second, third, fourth, fifth and sixth Plenary meetings (Temporary Documents Nos. 33/PLEN., 43/PLEN., 48/PLEN., 52/PLEN., 57/PLEN., 66/PLEN., 71/PLEN.)

- 4.1 *Minutes of the inaugural meeting* (Temporary Document No. 33/PLEN.)

Approved.

4.2 *Minutes of the first Plenary meeting* (Temporary Document No. 43/PLEN.)

Approved.

4.3 *Minutes of the second Plenary meeting* (Temporary Document No. 48/PLEN.)

Approved, subject to some amendments to be handed to the Secretariat.

4.4 *Minutes of the third Plenary meeting* (Temporary Document No. 52/PLEN.)

Approved, subject to amendments proposed by the delegates of Denmark and Senegal.

4.5 *Minutes of the fourth Plenary meeting* (Temporary Document No. 57/PLEN.)

Approved, subject to amendments by the Chairman of Study Group II, the Chairman of Study Group III and the representative of the Society for Worldwide Interbank Financial Telecommunications S.C.

4.6 *Minutes of the fifth Plenary meeting* (Temporary Document No. 66/PLEN.)

Approved, subject to drafting amendments.

4.7 *Minutes of the sixth Plenary meeting* (Temporary Document No. 71/PLEN.)

Approved, subject to a correction indicated by the Chairman of Study Group XVII and other drafting amendments.

4.8 *The Director of the CCITT* suggested that the Chairman should be authorized to approve the remaining minutes of Plenary meetings.

It was so agreed.

5 Report of Committee C (Temporary Document No. 79/PLEN.)

5.1 *The Chairman of Committee C* (Mr. Katona Kis, Hungary) introduced the Report of Committee C (Temporary Document No. 79/PLEN.).

5.2 *The delegate of France* observed that the last two lines of § 5 should read “that future CCITT expenditure can be reduced or even maintained at a foreseeable level”.

5.3 *The delegate of the United Kingdom*, referring to § 6 of the Report, asked whether savings might not be made, particularly with respect to translation and interpretation services, by grouping the meetings of Study Groups or Working Parties concerned with related subjects; if so, the Plenary Assembly should take the possibility into account in drawing up the CCITT calendar of meetings.

5.4 *The delegate of Lebanon* asked whether the method of organizing meetings of the CCIR was not less costly than that of the CCITT.

5.5 *The Chief of the Finance Department* said that the figure of 61 000 Swiss francs for a week of CCITT meetings related mainly to interpreters' salaries. If two meetings were held simultaneously, twice as many interpreters would still have to be recruited. Savings could be made only on travel costs, and the possibility of reducing costs was therefore not great. Moreover, the figure of 61 000 Swiss francs did not include the cost of common services. The total cost of a week's meeting, including common services expenditure, was estimated at 180 000 Swiss francs. The cost of CCIR meetings was estimated at 36 000 Swiss francs a day, which amounted to much the same. The two systems were more or less equivalent from the point of view of expenditure.

The Report of Committee C (Temporary Document No. 79/PLEN.) was *adopted*.

5.6 *The Chairman* thanked the Chairman of Committee C and all the members of the Committee for their excellent work.

6 Report of Committee D (Temporary Document No. 80/PLEN.)

6.1 *The Senior Counsellor* read out some amendments to the Report of Committee D.

In the third line of § 1.5, the words “two subjects which were” should be replaced by “a subject which was” and the second indent should be deleted.

The reference to Annex E should be deleted from § 4.3.

In the English version, the word “and” should be inserted before “requests” at the bottom of page 6.

In Annex B, Section I, against GAS 8, the phrase “see terms of reference of GAS 8 in Annex C” should be deleted, since those terms of reference had not yet been drawn up. In the same Section, against GAS 9, the entry in the Remarks column should read “See terms of reference of GAS 9 in Annex C”.

6.2 *The Chairman of Committee D* (Mr. Ali Belhadj, Algeria), introducing the Report of Committee D (Temporary Document No. 80/PLEN.), said that the results of the Committee's work had been substantial, but were incomplete due to lack of time. In particular, Committee D had been unable to specify all the subjects assigned to the GAS and the Study

Groups. Nor had it had time to study the question of the cost of the Handbooks, or to draw up a text on future technical assistance activities for the Administrative Council and the Plenipotentiary Conference.

Moreover, delay in the submission of the results obtained by Committee D had hampered the work of Committee A and especially that of Committee B. He therefore recommended that at future Plenary Assemblies meetings of Committee D should be held during the first week.

6.3 The *Chairman* replied that the Plenary Assembly had duly noted that recommendation.

6.4 The *delegate of Lebanon* suggested that a small ad hoc group be set up to draw up terms of reference for GAS 8 to be submitted to the Plenary Assembly during the afternoon meeting.

6.5 After an exchange of views, the *Chairman* proposed that the group should be presided over by the delegate of Lebanon and should comprise a delegate of France, a representative of the CCIR and a delegate of Italy, on the understanding that any other interested delegation could also participate.

It was so *decided*.

6.6 The *Chairman* invited the Assembly to consider the Report of Committee D paragraph by paragraph.

6.6.1 Section 1

6.6.1.1 The *Chairman of Committee D* said that the last part of § 1.2, beginning with the words “particularly Temporary Document No. 54/PLEN. by the Secretary-General of the ITU ...”, should be deleted. He had referred to that document at the second meeting of Committee D for information only and had specified that the document could not be placed on the Committee’s agenda.

6.6.1.2 The *delegate of Brazil*, referring to § 1.2, suggested that the temporary documents reviewed by the Committee should also be listed.

6.6.1.3 The *Senior Counsellor* explained that the format of the Report of Committee D was based on that of the Report of Committee A. Those Reports would be printed in the *Yellow Book*, which could not contain references to temporary documents. If the temporary documents were listed in the Report of Committee D, their titles might be given, but the content could not appear in the Report. It might be best to follow the method adopted by Committee A.

6.6.1.4 The *representative of the CCITT* said that the *Yellow Book* would contain a list of white documents and of temporary documents of the Plenary and the Committees. The Secretariat would keep the texts of temporary documents in its archives.

6.6.1.5 The *delegate of the United Kingdom* said that, in that case, there should be no difficulty in listing the temporary documents examined, with their titles, in the Report of Committee D.

It would also be useful to publish the Summary Records of the Committee’s meetings.

6.6.1.6 The *Chairman* pointed out that, in the case of the Report of Committee A, the Plenary Assembly had already decided to publish not only the Summary Records of the Committee but also the Reports of Working Groups 1 and 2. The Assembly might take a similar decision with respect to the Report of Committee D.

It was so *decided*.

6.6.2 Section 2

No comment.

6.6.3 Section 3 and Annex A

6.6.3.1 The *delegate of Morocco* wondered why the CCITT had been added to the title of the draft Resolution submitted by Committee D; in his view, the addition could restrict the scope of available assistance.

6.6.3.2 The *representative of the CCITT* said that he had proposed the addition, since the Resolution would appear in the *Yellow Book*, and moreover the Administrative Council to which this Resolution would be submitted would thus know that the text stemmed from the CCITT.

Section 3 and Annex A of Temporary Document N. 80/PLEN. were *approved*.

6.6.4 Section 4 and Annexes B, C and D

6.6.4.1 The *delegate of Lebanon* noted that, although the Remarks column of Annex B referred to terms of reference of GAS 8 in Annex C, Annex C contained no such terms of reference.

6.6.4.2 It was *agreed* that the Secretariat would produce an Annex E to Temporary Document No. 80/PLEN., containing the terms of reference of GAS 8.

6.6.4.3 The *delegate of the United States of America* said that his delegation was opposed to an increase in the number of Special Autonomous Groups; the cost of such Groups, reflected in Temporary Document No. 79/PLEN., was bound to place an additional burden on contributions.

6.6.4.4 The *delegate of Australia* agreed. As his delegation had pointed out in Committee D, moreover, to establish a regional satellite network study effectively was beyond the CCITT’s limited resources. If the latter were concentrated on fewer tasks, the benefits for the developing countries would be greater.

6.6.4.5 The *delegate of Canada* said that his country's readiness to assist the developing countries was a matter of record; Canada has participated in the work of several Special Autonomous Groups, and had acted as host for a number of GAS 5 workshops. Nevertheless, Canada was sympathetic to the concern expressed by the delegates of the United States of America and Australia.

6.6.4.6 The *Director of the CCIR* said that, as part of the work of Study Group 4, the CCIR had recently been involved in the establishment of a Group of Experts for the purpose of producing a handbook in satellite systems management for the fixed service. In that connection, the CCIR would like to participate in the work of GAS 8.

6.6.4.7 The *delegate of Lebanon* expressed his delegation's appreciation of the CCIR's interest in the work of GAS 8. He regretted the attempt to revert to matters which had already been decided upon at the Committee stage; that attempt reflected the all too frequent reluctance of certain industrialized nations to provide technical assistance to the developing countries. He called for clear observance of the provisions of Article 4 of the ITU Convention.

6.6.4.8 The *delegate of Senegal* said he felt obliged to take the floor in view of the direction the debate had taken. The countries which were persistently nullifying the actions of developing countries should take the following remarks into account:

The Report of the Director of the CCITT showed that more than 80% of the activities of CCITT Study Groups and Joint Study Groups related more particularly to technologically developed countries. Yet it must be recognized that the developing countries, which were also members of the CCITT and represented 70% of the world population, had in full awareness and mature judgement expressed through the World Plan Committee their priority concerns with regard to the harmonious development of regional telecommunication networks on the one hand and of the integrated world network on the other hand. It therefore seemed vitally important to his delegation that the determining role of international cooperation should be recognized at the level of such an important body as the CCITT.

Finally, he wished to point out that the countries most directly concerned by CCITT technical assistance fully respected the interest of the developed countries in the work of the CCITT; he would therefore venture to request the developed countries to apply the reciprocity rule as far as possible.

6.6.4.9 The *delegates of Algeria, Cuba, Kuwait, Gabon, Thailand, Venezuela, Nigeria and Argentina* supported the delegates of Lebanon and Senegal.

6.6.4.10 The *delegate of India* expressed the hope that, in reproducing the terms of reference of GAS 8 as an Annex, care would be taken to distinguish them from those of Study Group 4 of CCIR. He too endorsed the comments made by the delegates of Lebanon and Senegal.

6.6.4.11 The *delegate of France* said that Special Autonomous Groups were unquestionably a means of assisting the developing countries. It was essential, of course, to ensure that appropriate subjects were selected and that the tasks were approached in the best possible way. In that connection, to put all the work in the hands of one body would be cumbersome, whereas to distribute it among various groups should speed up the work; that point had been borne in mind by Commission D, and France had been ready to assist in the formation of the groups and was to chair GAS 8. The decisions already taken on the subject in Committee D should be upheld. With regard to the proliferation of handbooks, the various views held were already on record.

6.6.4.12 The *delegate of the United Kingdom* endorsed those comments. The number of Special Autonomous Groups might well become less in the near future, as soon as some of the unfinished work from the previous study period had been completed. The United Kingdom too was ready to help in the work of those groups, and would be providing a Vice-Chairman for GAS 9.

6.6.4.13 The *Chairman of Committee D* said that, as that Committee had made clear, the work of the Special Autonomous Groups must be completed within one period and the results must be made available to all countries as quickly as possible. The handbooks, of course, must be produced with all possible speed; possibly the Plenary Assembly documents could be used for that purpose.

6.6.4.14 The *Chairman*, in reply to a question by the *Chairman of GAS 3*, said that, as he understood it, the full cost of producing handbooks was not recovered by their sales, and that it was not intended to cover the administration expenses. In any case, the cost of the task should surely be viewed as part of the service to developing countries to be provided pursuant to Article 4 of the ITU Convention, to which the delegate of Lebanon had referred.

With respect to the question of the number of Special Autonomous Groups, the discussion revealed a wide consensus in favour of the proposals indicated in Temporary Document No. 80/PLEN.

6.6.4.15 The *Chairman of Study Group II*, referring to the preparation of handbooks, said he had understood that draft Questions would be submitted to the various Study Group Chairmen, and that texts would be available that afternoon.

6.6.4.16 The *Chairman of Committee B* said that, since information from Study Groups was not yet available, it was unlikely that a text could be produced that day.

6.6.4.17 It was *agreed* that the matter would be finalized at the meeting of Chairmen and that the text of the Questions could be produced in the form of Annexes.

6.6.4.18 Referring to a question raised by the *delegate of Sweden*, the *Senior Counsellor* said that, in order to preserve Question 7/XVI, it was proposed to adopt, in the handbook of Study Group XVI, the existing wording of Question 7/XVI in the *Orange Book*, with the addition of the words:

“Particular attention should be given to the introduction of digital elements into an analogue telephone network. Coordination with GAS 9 will be necessary to avoid discrepancies or needless repetition.”

6.6.4.19 Section 4 and Annexes B, C and D of Temporary Document No. 80/PLEN. were *approved*.

6.6.5 The Report by Committee D to the Plenary Assembly on CCITT Technical Assistance (Temporary Document No. 80/PLEN.) was *approved*.

6.7 The *Chairman* and *Vice-Chairman* thanked the Chairman and officers of Committee D, and the Secretariat of the CCITT, for the work accomplished.

The meeting was suspended at 13.00 hours and resumed at 14.30 hours.

7 Report of the Editorial Committee

7.1 The *Chairman of the Editorial Committee* reported orally on the Committee's work, observing that some difficulty had been encountered in following the draft texts through the various stages of their consideration. It would be useful if, in the future, the draft Opinions, Resolutions and Recommendations submitted by Study Groups could be extracted from the Reports concerned and presented as Temporary Documents of the Assembly. In the absence of official confirmation that GAS 6 had completed its work, the Editorial Committee had not been able to take a final decision on the deletion of Resolution No. 11. All in all, twelve new texts had been adopted by the Assembly and some twenty others extensively modified.

7.2 It was *decided* to delete Resolution No. 11.

7.3 The Report by the Chairman of the Editorial Committee was *noted*.

8 Final approval of Documents AP VII-Nos. 71 and 69

8.1 Document AP VII-No. 71 – *Report on the activity of the CCITT between the VIth and VIIth Plenary Assemblies*

The *Chairman* recalled that Document AP VII-No. 71 had been provisionally approved pending the outcome of the deliberations of Committees A and B. He proposed that it should now be finally approved.

It was so *decided*.

8.2 Document AP VII-No. 69 – *Report on the CCITT Secretariat (including the Laboratory)*

8.2.1 The *Chairman* reminded delegations that the Report had already been discussed by the Assembly but that its approval had been deferred until the programme of work for the next study period had been finalized.

8.2.2 The *delegate of Lebanon*, supported by the *delegate of France*, proposed that the Assembly should adopt a draft Opinion, the text of which he read out, in which the Administrative Council's attention was drawn both to the need to provide the CCITT Secretariat with the means necessary to perform the tasks assigned to it and to the importance of ensuring adequate career prospects for CCITT engineers.

8.2.3 The Assembly *approved* the Report in Document AP VII-No. 69 and *adopted* the draft Opinion proposed by the delegate of Lebanon.

9 Appointment of Chairmen and Vice-Chairmen of Study Groups, Plan Committees, Joint Working Parties and Special Autonomous Groups set up by the VIIth Plenary Assembly (Temporary Document No. 81/PLEN.)

9.1 The *Chairman* drew attention to the proposals submitted by the Heads of delegation in Temporary Document No. 81/PLEN.

9.2 The *Senior Counsellor* read out corrections and additions to the list of names in the document.

9.3 The *delegates of Nigeria, Ethiopia and Hungary* drew attention to further minor corrections to be made in the list.

9.4 The *delegate of the United States*, replying to a question by the *Chairman*, said that it would take approximately a month to find somebody to replace the outgoing Chairman of GAS 3, whose resignation had come as a surprise to his delegation.

9.5 Following a short discussion, it was *agreed* to appoint Mr. Lucas (Spain) as a Vice-Chairman of GAS 3, on the understanding that he would take on the chairmanship should the United States be unable to provide a candidate within the next month.

- 9.6 The *delegate of Switzerland* informed the Assembly that the Swiss Vice-Chairman of GAS 4 would be Mr. H. Graf.
- 9.7 The *delegate of Liberia* said that the name of the Liberian Vice-Chairman of GAS 7 would be communicated to the CCITT Secretariat within the next fortnight.
- 9.8 The list of Chairmen and Vice-Chairmen in Temporary Document No. 81/PLEN., as amended, was *adopted*.
- 9.9 The *Director of the CCITT* said that a meeting of the newly appointed Chairmen had been scheduled for the beginning of the following week, in order to discuss the work programme for the coming period and consider how the changes in working methods approved by the Assembly could be applied with a view to improving efficiency.

The Vice-Chairmen present in Geneva were invited to participate in the meeting.

10 Dates and place of the VIIIth Plenary Assembly

- 10.1 The *Director of the CCITT* said that, since no invitation had been received so far, the next Plenary Assembly should in principle be held in Geneva. The exact dates in 1984 should be left for the Administrative Council to decide, in view of the many other important ITU meetings to be held during that year.

It was so *agreed*.

11 Schedule and holding of CCITT meetings (1981-1984)

- 11.1 The *delegate of Japan*, referring to Temporary Document No. 61/PLEN., formally extended his delegation's invitation to Study Group VII to hold its 1981 meeting in Japan. Japan had introduced some up-to-date data-switching services on the basis of Recommendations drawn up by Study Group VII, and the meeting would give participants an opportunity to see how those Recommendations were being applied.
- 11.2 The *delegates of the United Kingdom, the Republic of Korea and Canada* welcomed the invitation and supported the proposal.
- 11.3 The Japanese invitation in Temporary Document No. 61/PLEN. was *accepted with thanks*, subject to determination of the material and financial conditions between the Japanese Administration and the CCITT Secretariat.
- 11.4 The *Chairman* drew attention to Document AP VII-No. 28, which contained the schedule for meetings of the Plan Committees and their Coordination Committees.
- 11.5 The schedule of CCITT meetings (1981-1984) was *approved*.

12 Terms of reference of GAS 8

- 12.1 The *delegate of Lebanon*, Chairman of the ad hoc group set up earlier during the meeting, read out the terms of reference for GAS 8, "Economic and technical impacts of implementing a regional satellite network", drafted by his group.

Those terms of reference were *approved*.

- 12.2 The *Chairman* thanked the ad hoc group and its Chairman for the useful work done.

13 Texts of new Questions relating to the drafting of handbooks and other texts

- 13.1 The *Chairman of Committee B* read out the titles and texts of the new Questions on handbooks to be studied jointly by Study Groups II and IV and by Study Group XII, adding that those titles and texts would be submitted to the meeting of Chairmen of CCITT Study Groups.
- 13.2 The *Chairman of Study Group IV* observed that the two Annexes to the joint Question of Study Groups II and IV proposed by Committee B would suffice without any further additions.
- 13.3 After a brief discussion of the best way of dealing with the articles on optical fibres to be published in a forthcoming special issue of the Telecommunication Journal, the *Chairman* explained that the special issue of the Journal would be programmed at an unofficial meeting of the Chairman and Vice-Chairmen of Study Group XV at the end of January 1981 and at the meeting of the Working Party on Optical Fibres at the end of February 1981. The special issue would appear in the autumn of 1981. A special Question would be prepared with a view to ensuring its periodic updating.

It was so *agreed*.

- 13.4 The texts read out by the Chairman of Committee B were provisionally *approved*.

14 Numbering of merged Study Groups

14.1 The *Chairman* informed the Assembly of a suggestion by the Secretariat that merged Study Group IX/X should be numbered XIX and that merged Study Group VIII/XIV should be numbered XX.

14.2 The *delegate of Switzerland* supported that proposal, which would serve to avoid confusion with the former numbers.

14.3 The *delegate of the United Kingdom*, supported by the *delegate of the U.S.S.R.*, proposed that the lowest number of each two be adopted, as had been done in the case of merged Study Groups II/XIII and IV/XIII. That solution had led to no confusion.

After a brief discussion, the United Kingdom proposal was *approved*.

15 Approval of Temporary Document No. 63/PLEN.

The *Chairman* invited the Assembly to approve Temporary Document No. 63/PLEN., containing a further corrigendum to Document AP VII-No. 99 and drawn up in the light of the considerations set out in Temporary Document No. 45/PLEN.

Temporary Document No. 63/PLEN was *approved*.

The meeting rose at 16.15 hours.

ANNEX A**Statement by the Delegate of Venezuela**

"A group of countries, the vast majority of them industrialized, has already discussed and approved the idea that it should be for the ITU Administrative Council to take a decision on UNESCO's request to all countries to lower the tariffs for telecommunication services in which developing countries are involved, so as to facilitate the exchange of information regarded of interest to the development of those countries.

Any other countries that wish to do so are welcome to join Venezuela in stating for the record that it is opposed to the position adopted at this Plenary Assembly by a majority which it queries in view of the fact that the matter was decided in a moment of pressure owing to the lateness of the hour.

If one lives in a warm and comfortable house with plenty to eat and drink, it is easy to tell somebody who is cold and hungry outside to wait, that tomorrow or the day after – or within a month or a century – he will receive aid. The developing countries are tired of waiting with little hope.

Consequently, we fail to understand or explain the opposition that has arisen to the addition of a new Question for Study Group III, calling on it to study the possibility of establishing machinery whereby the developing countries should pay less for telecommunication traffic which helps them to meet their people's basic need for information. The answer probably lies not only in establishing a special tariff system but also in taking other steps to facilitate a reduction in tariffs for such services, and the CCITT is the body best qualified to make technical recommendations in that respect.

We would like to place on record that Venezuela does not support the decision taken by this Assembly and regards the shelving of a decision favourable to our countries as both unfair and unnecessary.

Most of the countries which attended the UNESCO General Conference (Belgrade, October 1980) are represented here and are familiar with the Resolution adopted. It is therefore our duty to support what was recommended therein, since we fully believe that the measure in question will help to improve the quality of life of mankind, bring about the social justice we wish to see established throughout the world and serve to facilitate the North-South dialogue."

CLOSING SESSION OF THE VIIth PLENARY ASSEMBLY**Friday, 21 November 1980, at 17.00 hrs****1 Address by the Chairman**

The *Chairman* delivered the closing address reproduced as Annex A.

2 Closing remarks by the Director of the CCITT

The *Director of the CCITT* said that the enormous amount of work carried out by the Plenary Assembly would condition the future of telecommunications and it was largely due to the Chairman's experience and competence that so much work had been completed. The VIIth Plenary Assembly had been particularly difficult and he would like to congratulate not only the Chairman himself, but the five Vice-Chairmen, the Chairman and Vice-Chairmen of the Committees and Working Groups and, of course, all members of the Study Groups which had produced the Recommendations which would form the basis for the work of the next study period. The Chairman had mentioned the major results of the Assembly which would make it possible for telecommunications to move forward in the present period of change. He personally wished to express his appreciation of the Plenary Assembly's adoption of an Opinion relating to the staffing of the Secretariat, which went some way to meet the Secretariat's legitimate concern about the growing volume of work to be performed in increasingly difficult and unrewarding circumstances.

In conclusion, he thanked the members of the CCITT Secretariat and the officials from the common services of the General Secretariat who had made such a large contribution to the success of the meeting. The forthcoming study period would be very important for the future of the CCITT and of world telecommunications, and he was pleased to think that the VIIth Plenary Assembly had established a firm basis for the work.

3 Completion of the work of the Plenary Assembly

3.1 The *Head of the French delegation* said it was an honour for him to speak on behalf of all the delegations present and congratulate the Chairman on his invaluable contribution to the success of the meeting. He also expressed his gratitude to the Secretary-General, the Deputy Secretary-General and the Director of the CCIR, the entire Secretariat and all the delegates who had played a vital role. It had become a tradition to pay tribute to the Chairman's competence and courtesy. In the case of the VIIth Plenary Assembly, those words fell far short of the reality; it was the Chairman's masterly conduct of the meetings which had enabled the Assembly to complete its work in the two weeks allocated.

3.2 The *Chairman* thanked the delegate of France for his kind words, and declared closed the VIIth Plenary Assembly of the CCITT.

The meeting rose at 17.15 hours.

ANNEX A**Closing address by the Chairman of the VIIth Plenary Assembly**

"Ladies and Gentlemen,

The VIIth Plenary Assembly of the CCITT, over which I have had the honour of presiding, is now coming to an end, and I think that we can be satisfied with the results achieved during the past two weeks.

At the inaugural meeting of our Assembly, I said that great efforts would have to be made to bring about improvements in the structure, methods and work programme of the Committee, in order to ensure a more rational use of resources in the light of the important tasks that the CCITT would be called upon to perform.

I believe that we have achieved our goal in spite of the difficulties encountered, which were due also to the limited time at our disposal.

I cannot, of course, enumerate all the results attained, but I should like with your permission to mention some which seem to me to be particularly significant.

We have approved a large number of Recommendations which bear witness to the steady development of the so-called traditional services, as well as others which form the basis for new services made possible by technical and technological advances.

As I see it, these new services will entail revolutionary changes in the design and operation of telecommunication networks: together with the old services, they will ultimately use the integrated services digital network, which is the final goal of the development efforts of all Administrations.

If we consider the existing services, those already contemplated and others which will develop as telecommunications benefit increasingly from the vast opportunities offered by progress in data processing (computers and microprocessors), we can form an idea of the complexity and multiplicity of the questions that the CCITT will have to study in the near future.

To keep abreast of these developments, our Plenary Assembly has laid the foundations for restructuring the Study Groups and revising their terms of reference. In accordance with the Opinion we have approved, this restructuring will, I hope, be continued at the VIIIth Plenary Assembly, with a view to making the studies even more flexible through coordination and reduction of overlapping areas.

Interest in our work has been demonstrated by the large number of participants: over 500 delegates representing 84 countries and 20 international organizations took part in our deliberations.

The countries represented included a number of developing countries, for which CCI meetings are extremely useful in that they enable engineers from those countries to assess at first hand the results of the studies conducted by the various Study Groups and to obtain valuable information for the solution of problems confronting their Administrations.

Nevertheless, the participation of the developing countries is still hampered by financial considerations and by the shortage of specialized staff, and we should like this attendance to become more widespread. That is why this Assembly has adopted some measures designed to help the developing countries overcome their difficulties and to expand the technical assistance activities of the CCITT.

To this end, the Assembly decided *inter alia* that special handbooks on subjects of practical interest to the developing countries should be prepared, completed or updated. The drafting of these important handbooks was entrusted to the Study Groups concerned and to the Special Autonomous Study Groups, the number of which has been increased in order to meet this requirement efficiently and rapidly.

To continue with my summary, I should also like to remind you that we examined the reports of our Study Groups on the work done during the interval between the VIth and VIIth Plenary Assemblies. By approving these reports, we have provided telecommunication Administrations with a further efficient means of benefitting as economically as possible from the opportunities offered by modern technology.

I wish to thank all the members of our Study Groups and Working Parties as well as their Chairmen and Vice-Chairmen. Our success is also due to the Vice-Chairmen of our Assembly and to the Chairmen and Vice-Chairmen of the Committees and Working Parties set up during our deliberations, who successfully accomplished the difficult tasks assigned to them in the short time that I was able to give them.

I also wish to express my thanks to Mr. Mili, our Secretary-General, to Mr. Butler, Deputy Secretary-General, to Mr. Berrada, Chairman of the IFRB, and to Mr. Kirby, Director of the CCIR.

I should like to convey our very special gratitude to Mr. Burtz, Director of the CCITT, for his active and key role in preparing this Assembly and for his valuable assistance to us during our deliberations.

My thanks also go to the Secretariat of the Assembly, the Counsellors, the engineers and all the staff of the CCITT, the *précis*-writers, the interpreters and all those who worked indefatigably in the background for the success of our work.

But above all I wish to thank the delegates to this Plenary Assembly who at all times guided me, with remarkable skill, understanding and collaboration, towards the best possible solutions.

Ladies and Gentlemen, we are about to enter upon a new study period. I think that I am speaking for all of you in expressing the most fervent hope that the work we have programmed here will be crowned with success for the benefit of our countries' telecommunication services, which are an essential factor of human progress and understanding between peoples."

5 – REPORTS

5.1 – REPORT BY THE DIRECTOR ON THE ACTIVITY OF THE CCITT BETWEEN THE VIth AND VIIth PLENARY ASSEMBLIES

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	<i>Annex A</i> – List of meetings
	<i>Annex B</i> – Participation of Member countries in meetings

1 Introduction

1.1 This Report has been prepared pursuant to No. 414 of the International Telecommunication Convention of Malaga-Torremolinos (1973).

1.2 The study period 1977-1980 was a period of intensive activity for the CCITT owing to the rapid development of technology in many branches of telecommunications. Substantial results were obtained in the various sectors as is shown by the information given below and the reports of the Study Groups to the VIIth CCITT Plenary Assembly.

2 General statistical information concerning the activity of Study Groups

2.1 List of meetings held

2.1.1 Annex A gives a complete list of the meetings (including final meetings) held by the various Study Groups (and their Working Parties), the Joint Working Parties, the Special Autonomous Groups and the Plan Committees. The meetings are listed in chronological order for each Study Group.

2.1.2 The following Table 1 has been prepared on the basis of the list, giving a synoptic view of the number and duration of meetings.

The table shows that some Study Groups (in Plenary Meetings and in Working Parties) have held a large number of meetings.

2.1.3 Particularly noteworthy is the increasing number of what are called “restricted” meetings held in certain Study Groups, consisting of small teams of specialists working without interpretation and often without even the participation of a Secretariat engineer (because the credits for meetings would not cover his travel costs). As was pointed out at the VIth

Plenary Assembly, such informal meetings have certain advantages and, in particular, they are often useful in clearing the ground for the study of difficult questions in clearly defined fields. But they also have drawbacks; the participants are confined to a few specialists from only a small number of countries with the result that their personal views tend to be reflected in technical developments or in Study Groups' decisions in the preparation of Recommendations; they restrict, or even prevent, the participation of delegates who do not have a sufficient knowledge of English to take an active part in the discussions.

The VIIth Plenary Assembly will certainly wish to take a decision on this problem and to give the necessary instructions to the Chairmen of Study Groups.

2.2 Participation in meetings

Column 3 in Table I gives the number of delegates who participated in the work of each Study Group. This figure has been obtained by adding together the numbers of participants in each of the meetings, irrespective of their nature.

TABLE I
Meetings

Study Group or Working Party	Number of meetings	Number of participants	Number of working days of meeting				Total
			With interpretation		Without interpretation		
			In Geneva	Outside Geneva	In Geneva	Outside Geneva	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I	16	559	14	17	54	—	85
II	20	784	41	—	22	11	74
III	14	941	56	—	5	—	61
IV	19	795	46	—	36	—	82
V	6	156	13	—	7	—	20
VI	3	108	10	—	—	4	14
VII	25	995	25	—	44	37	106
VIII	19	529	10	10	61	—	81
IX	5	311	22	—	3	—	25
X	6	280	24	—	2	—	26
XI	26	1 159	27	—	88	56	171
XII	10	416	23	—	9	—	32
XIV	11	378	16	7	14	10	47
XV	10	915	39	—	14	—	53
XVI	4	254	15	—	—	—	15
XVII	6	618	17	—	5	10	32
XVIII	6	589	38	—	2	—	40
CMBD	5	254	16	—	2	—	18
World Plan	2	397	3	8	—	—	11
Plan AF	2	210	—	8	—	—	8
Plan AL	2	93	—	9	—	—	9
Plan AS	2	109	2	5	—	—	7
Plan EU	2	103	3	5	—	—	8
LTG	2	74	6	—	—	—	6
SMM	4	186	17	—	3	—	20
GAS 3	12	132	16	—	24	23	63
GAS 5	5	172	12	—	13	—	25
GAS 6	12	371	6	12	18	15	51
TAF	—	—	—	—	—	—	—
TAL	1	48	—	2	—	—	2
TAS	—	—	—	—	—	—	—
TEUREM	3	70	7	—	—	—	7
Meeting of Chairmen	3	128	7	—	—	—	7
Total	263	12 134	531	83	426	166	1206
			614		579		

Annex B gives a list of the Member countries, represented by an Administration or a recognized private operating agency, which participated in Study Group meetings. It will be seen that the number of countries represented generally did not exceed about 40, except in the case of the World Plan Committee Meeting in April 1980 at which 76 countries were represented, which was a record. In all, however, 112 countries have participated in the meetings of at least one Study Group. (There was greater participation than in the past by the countries concerned in Regional Plan Meetings.)

2.3 Registered members of Study Groups

2.3.1 Table 2 shows the numbers of registered members of Study Groups, i.e. the list of those who have registered for the receipt of contributions and other documents.

TABLE 2
Numbers of registered members of Study Groups

	A	B	C	D	Total
I	134	52	60	14	260
II	138	50	69	18	275
III	135	56	45	25	261
IV	133	47	78	16	274
V	125	38	73	20	256
VI	121	38	66	13	238
VII	126	59	129	28	342
VIII	125	47	36	19	227
IX	129	45	77	13	264
X	127	47	77	10	261
XI	134	44	90	14	282
XII	125	43	77	11	256
XIV	122	47	91	14	274
XV	134	48	95	16	293
XVI	125	51	76	10	262
XVII	124	57	133	30	344
XVIII	130	54	111	18	313
CMBD	122	46	60	11	239
World Plan	136	46	49	17	248
Plan AF	109	36	47	12	204
Plan AL	93	38	47	11	189
Plan AS	96	38	45	13	192
Plan EU	106	39	51	12	208
LTG	120	47	68	12	247
SMM	113	45	32	13	203
GAS 3	125	44	68	11	248
GAS 5	133	46	58	13	250
GAS 6	134	40	61	8	243
TAF	103	34	22	5	164
TAL	95	35	21	6	157
TAS	91	36	20	6	153
TEUREM	107	40	24	6	177
Total	3984	1484	2056	445	7969

The meaning of the various columns is as follows:

A: Administrations of Member countries;

B: recognized private operating agencies authorized to participate in the work of the CCITT (No. 74 of the Convention);

C: industrial or scientific organizations admitted to participate in an advisory capacity in meetings of Study Groups (No. 379 of the Convention);

D: international and regional telecommunication organizations admitted to participate, in an advisory capacity, in the work of the CCITT (No. 377 of the Convention).

The total number of registrations is given as 7969 but this figure covers both entities registered for a single copy of documents in a given language and organizations registered for several dozen copies, sometimes in a number of languages, each of which counts as one unit.

2.3.2 The large participation of industrial organizations, usually manufacturers of telecommunication equipment, will be noted; they are showing a growing interest in the work of the CCITT and especially of certain Study Groups (VII, XI, XIV, XV, XVIII), in which they are coming to play a preponderant role.

2.3.3 During the study period 1977-1980, a fairly large number of admissions were authorized by the Administrations of Member countries.

At 10 May 1980 the following were participating in the work of the CCITT:

50 recognized private operating agencies,

136 scientific or industrial organizations, and

31 international organizations concerned with telecommunications (not including the specialized agencies of the United Nations).

2.4 *Contributions – Recommendations and Questions*

Table 3 gives statistical data on the results of the Study Groups' work.

TABLE 3
Contributions – Recommendations – Questions

Study Group or Working Party	Number of contributions received			Recommendation Series	Number of new Recommendations	Number of Recs. substantially amended	Number of Questions	
	Normal	Delayed	Total				Studied 1977-1980	To be studied 1981-1984
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I	232	76	308	F	15	2	13	17
II	235	93	328	E	10	18	21	24
III	135	46	181	D	10	9	20	27
IV	203	85	288	M,N,O	21	13	24	20
V	85	13	98	K	2(a)	2	19	17
VI	32	21	53	L	(b)		14	18
VII	494	190	684	X	19	13	36	39
VIII	189	90	279	S	10	1	11	17
IX	158	23	181	R	5	4	15	15
X	111	39	150	U	9	1	11	11
XI	402	426	828	Q,Z	52	10	13	18
XII	226	57	283	P	6	5	22	25
XIV	137	102	239	T	3	6	9	13
XV	371	102	473	G,H,J	11	42	38	28
XVI	139	28	167	G	6	4	13	7
XVII	263	99	362	V	2	19	21	19
XVIII	402	103	505	G	16	25	18	19
CMBD	92	16	108	G	2	2	7	12
World Plan	(d) 39	19	58					
Plan AF	(d) 6	38	44					
Plan AL	(d) 5	30	35					
Plan AS	(d) 14	8	22					
Plan EU	(d) 49	7	56					
LTG	40	4	44	H	1	10	5	4
SMM	67	20	87		3	—	2	3
GAS 3 (c)	56	—	56					
GAS 5 (c)	24	6	30		1	1		
GAS 6 (c)	53	33	86					
TAF	3	—	3					
TAL	4	—	4					
TAS	2	—	2					
TEUREM	5	—	5					
Total	4279	1775	6054		204	187	332	353

Notes:

- a) Adjunction to the Handbook "Directives concerning protection of telecommunication lines against harmful effects from electricity lines".
b) Preparation of the Handbooks "Jointing of communication cable conductors" and "Jointing of plastic-sheathed cables" completed.
c) The GAS prepare Handbooks; they are assigned subjects for study, not Questions.
d) The Plan Committees do not issue Recommendations.

2.4.1 *Contributions received*

The number of contributions received and published continues to increase; 6054, or 70% more than the number of contributions (4335) during the preceding period.

This is the best criterion of the ever increasing interest shown by Administrations and other participating organizations in the work of the CCITT and the extent to which they cooperate in that work.

This substantial number of contributions also provides a measure of the amount of work that had to be done by the CCITT Secretariat and the Common Services of the General Secretariat in having the documents translated, typed, reproduced and circulated. But it is, above all, a measure of the amount of work done by the Study Groups in examining them and drawing conclusions from them for the preparation of Recommendations.

Unfortunately, all too many of these contributions reach the CCITT Secretariat too late for normal publication as White Documents, distributed before the meetings. It is important that, in sending in and presenting their contributions, Administrations and recognized private operating agencies should comply with the provisions of CCITT Resolution No. 1 (see also, in this connection, Document AP VII-No. 82).

2.4.2 Recommendations and Questions

The full significance of the figures given in columns 6 and 7 of Table 3 on Recommendations is appreciated only if they are compared with those of the previous study periods:

	1968-1972	1973-1976	1977-1980
New Recommendations	67	127	204
Recommendations substantially amended	199	225	187

These figures show that the Study Groups have taken the maximum advantage of the contributions submitted to them and of the meetings organized and have been able to reach agreement on a large number of points.

The number of Questions to be studied in the forthcoming period 1981-1984 shows a small increase (6%) over that of the period which is coming to an end. But this figure in itself is an indication that the number of contributions to be examined will increase still further and that the workload of the Study Groups and of the CCITT will augment accordingly during the next four years.

2.5 Overall view of the activities of the CCITT

Using only the headings on page 103 of Volume 1 of the *Orange Book*, the two tables below give a synoptic, if somewhat over-simplified, view of the growth in the activities of the CCITT since its inception:

a) Volume of work (excluding meetings of the Plenary Assembly)

	1st period (1956-1960)	2nd period (1960-1964)	3rd period (1964-1968)	4th period (1968-1972)	5th period (1973-1976)	6th period (1977-1980)
Meeting days	628	808	1107	810	943	1206
Contributions published	1000	1500	2015	2625	4335	6054
Circulars issued	120	140	160	200	211	186

b) Participation

Registered members of Study Groups	2615	4496	8000 approx.	9946	9833	7969 ¹⁾
Private operating agencies taking part	20	25	39	43	46	50
Industrial organizations taking part	22	61	83	97	119	136

3 Results of the work of Study Groups and Joint Working Parties

3.1 Study Groups dealing with telegraphy, teleinformatics and data transmission

3.1.1 Telegraph and teleinformatic services

Study Group I concentrated its studies on the following services:

a) The telex service

To take account of new developments in the field of telex switching, a Recommendation on enhanced facilities for telex subscribers has been prepared. Jointly with Study Group X, a new Recommendation on the interconnection of private teleprinter exchanges with the telex network has been drafted.

In the field of the maritime mobile services a set of new rules has been drawn up to cover various aspects of these services such as ship station identification, service codes, quality objectives, store and forward facilities, etc. These texts required close cooperation with Study Group II and the CCIR.

b) The Teletex service

In one study period Study Group I was able to prepare only a detailed description of this new service, which served as a basis for parallel studies in the technical Study Groups concerned. Any public subscriber telecommunication network will be able to provide the Teletex service, which will fill a gap between telex and data services as a sophisticated text communication medium.

¹⁾ As far as possible and for economy reasons, documents were dispatched in groups in the period 1977-1980.

c) *The Telefax services*

Based on existing Recommendations for facsimile equipment, Study Group I drafted a corresponding text for a Telefax 2 service (group 2 analogue machines) and a Telefax 3 service (group 3 digital machines), both to be operated over the public telephone network. Administrations have thus upgraded this facility from an attachment to an international service for which they assume end-to-end responsibility.

d) *The Bureaufax service*

By analogy with the alphabetical telegram service, a Recommendation has been drafted for a public facsimile message service using the CCITT defined facsimile terminals and the various telecommunication networks such as the telephone network, the public data networks and point-to-point connections.

e) *The Videotex service*

Study Group I was able to draft, also in one study period, only a description of this new service which is capable of providing various teleinformatic facilities and applications such as information retrieval from data bases, interactive services and terminal-to-terminal communications. The draft Recommendation is considered simply as a point of departure, since much more work will be required in this new and promising application of teleinformatics.

3.1.2 *Alphabetic telegraphy, data and teleinformatic terminals*a) *Telex terminals*

Study Group VIII drafted a number of Recommendations to enhance the operation of telex terminals, e.g. by the addition of a display screen, an automatic calling, answering and clearing function or alphabet conversion.

b) *Teletex terminals*

Although Teletex and Videotex terminals started only during this study period, Study Group VIII succeeded in preparing detailed Recommendations on the technical characteristics of the Teletex terminal, the control procedures and the coded character set. With the latter Recommendation, the CCITT cleared the way for a multi-alphabet application in the international service.

c) *Videotex terminals*

Taking the service description by Study Group I as a basis, Study Group VIII drafted a Recommendation on the technical characteristics of a Videotex terminal which contains a basic graphic repertoire for characters and symbols. For the pictorial information, four different options are offered to Administrations.

3.1.3 *Telegraph transmission*

Study Group IX refined a number of Recommendations of the R Series and drafted new Recommendations, including test texts, on transmission standards in the terrestrial and mobile services.

3.1.4 *Telegraph switching*

Study Group X's main activities were devoted to the signalling aspects of the interconnection of the terrestrial telex network with maritime systems, to the introduction of new user facilities, such as changed address interception and call rerouting or the recorded message facility, and to the drafting of a hypothetical reference connection which will be the basis for various applications such as network planning, service quality evaluations, etc.

3.1.5 *Facsimile technique*

Study Group XIV's work on facsimile terminals and procedures was re-oriented to take account of Study Group I's decision to define the Telefax, Datafax and Bureaufax services. Consequently, the relevant T Series Recommendations had been revised and refined so that Group 2 and Group 3 machines are now the basis of the new services over the telephone network. For the definition of Group 3 machines, a new Recommendation has been drafted to permit under 1-minute transmission by using digital encoding and redundancy reduction techniques.

3.1.6 *Public data networks*

Study Group VII refined existing Recommendations and drafted new Recommendations in the following domains:

a) *Services, facilities and network access*

A number of new facilities have been included in the range of services offered to take account of customer requirements. In particular, a provisional Recommendation has been approved on customer access to packet switched networks via other types of network and using start-stop terminals; the rules for low-speed customer access to a synchronous network have been set out; the multiplexing arrangements to provide a pair of low-speed subscriber channels over a single high-speed subscriber line have been defined.

b) *Internetwork signalling*

Major progress has been made in standardizing a common channel signalling system for circuit switched networks, a signalling and data transfer system for packet switched networks (in view of its urgency, approved by letter ballot) and the rules for interworking between the circuit switched services; a Recommendation on implementation of user facilities was prepared.

c) *Network aspects and maintenance*

The urgently required numbering plan for data networks was finalized and approved by letter ballot early during the study period and the corresponding basic rules for the routing principles were drawn up. Two texts on service quality criteria have been drafted which will permit the user to base his operating systems on some internationally agreed threshold figures. To facilitate fault location and follow-up actions some testing arrangements have been formulated.

d) *Administrative arrangements*

Two new Recommendations have been drafted, one describing the responsibilities of subscribers and Administrations in coordinating the application procedure for closed user groups, the other concerning the provision of directories of electronic directory information services.

3.1.7 *Data transmission over telephone circuits*

Study Group XVII drafted a Recommendation on a 1200 bit/s full duplex modem which has been approved by letter ballot. Preliminary studies have been undertaken on a voice band 2400 bit/s full duplex modem. A draft Recommendation on a group band 4-wire modem above 72 kbit/s has been drawn up for submission to the VIIth Plenary Assembly.

3.1.8 *Symposia on teleinformatic services*

Two interdisciplinary symposia on new teleinformatic services took place in 1979 and 1980. They covered aspects of:

- the Teletex service,
- the Videotex service,
- the various facsimile services,
- teleinformatic services provided for specific user groups, and
- the future development of teleinformatics.

The objective was to exchange views and information about the important consequences which the new teleinformatic services and techniques will have on the whole telecommunication environment.

The symposia proved most informative for the delegates and the members of Administrations, RPOAs, international organizations and scientific and industrial organizations who attended.

3.2 *Study Groups dealing with telephone transmission and maintenance*3.2.1 *Transmission systems*

Study Group XV obtained outstanding results during the period 1977-1980, mainly owing to its efficient organization.

In the field of transmission media, Study Group XV prepared a new and more uniform presentation of the Recommendations relating to symmetric and coaxial pair cables, taking into account their possible use for digital transmission. It drafted supplements on cable ships and submarine cables and proposes to draw up a compendium of cable measurement methods for the next study period. We should also mention the agreement reached on the first Recommendation on optical fibres giving the characteristics of index gradient optical fibre cables with a core diameter of 50 μm and a reference surface diameter of 125 μm .

With regard to equipments, Study Group XV proposes, inter alia, two new Recommendations dealing with echo suppressors and cancellers, respectively. It has finalized the Recommendation on 18-MHz analogue systems and added the sections on television transmission over 12, 18 and 60-MHz systems.

During its consideration of the present structure of Volume III, Study Group XV decided to propose the elimination of a number of outdated Recommendations, referring particularly to the use of vacuum tubes, and has sought as far as possible to harmonize the presentation of the Recommendations on transmission systems, communicating its comments to the other Study Groups concerned (XII, XVI and CMBD).

A number of sections of the Recommendations have been revised and improved to take account of the results of work on the disturbances affecting transmission equipment.

In agreement with the CMTT, Study Group XV has reviewed the J Series Recommendations on sound and television programme transmission. It has prepared Recommendations on videophone systems and digital line systems provided by analogue transmission media.

3.2.2 *Use of telephone-type lines for purposes other than telephony*

In conjunction with all the Study Groups concerned and in agreement with the controlling Study Group (Study Group XV), Joint Working Party LTG has proposed, inter alia, new specifications for a special quality leased circuit with simple adaptation. It has prepared a new supplement on the out-of-band characteristics of the signals applied to leased telephone-type circuits. A number of points will have to be considered during the next study period, in particular group links leased for telephone purposes.

3.2.3 *Digital networks*

In accordance with Resolution No. 1, Study Group XVIII has made extensive use of Special Rapporteurs. This method of working by correspondence made it possible to limit the number and duration of meetings, which nevertheless would have been fully justified in view of the importance of the coordinating work entrusted to the Study Group by the VIth Plenary Assembly with a view to laying down general principles for digital networks and the integration of services.

Study Group XVIII has given a possible answer to the problems connected with the period of transition from analogue to digital networks by formulating general standards for transmultiplexers and special standards for a 60-telephone-channel transmultiplex equipment.

With a view to the establishment of digital networks, Study Group XVIII has prepared Recommendations stating their maintenance principles and the quality standards in respect of errors and slip permissible on an international digital connection.

Study Group XVIII has amended existing provisions and drafted new sections on PCM and digital multiplexing equipment operating at bit rates corresponding to the established digital hierarchy. It has prepared a whole series of Recommendations on digital line sections and systems on cable at hierarchical bit rates and at the non-hierarchical bit rates 3152 kbit/s and 564 992 kbit/s.

Progress has been made in the study of users' access to integrated services digital networks and Study Group XVIII has drafted new Questions on the subject. The problem of interworking PCM multiplexers designed according to different standards, which is linked to satellite transmission, was studied in cooperation with CCIR Study Group 4. Study Group XVIII nevertheless prepared a Recommendation on the interconnection of digital paths using different techniques and it amended the Recommendation on interfaces.

During the next study period, Study Group XVIII will doubtless have to act to an increasing extent as coordinator between the various specialized CCITT and CCIR Study Groups in order to make progress with the integrated services digital network. The drafting of new Questions and the proposal to transfer a number of Questions to Study Group XV are connected with the fact that Study Group XVIII considers that it should play mainly a coordinating role in the establishment of digital networks.

Several of the subjects examined during this period will require further study in the next few years, in particular, the possibility of using coding methods other than PCM, the separate specification for the send and receive paths of PCM channels operating at voice frequencies and, above all, as we have already mentioned, access by users to integrated services digital networks.

3.2.4 *Telephone transmission quality*

The main role of Study Group XII is to provide other Study Groups, such as Study Groups XV, XVI, XVIII, etc., with basic data for transmission planning and equipment design. Its work is largely concerned with questions concerning telephone users and stations and their acoustic environment.

- a) Two new Recommendations (P. 78 and P.79) which were prepared mark the emergence of a new subjective method based on loudness which provides ratings more closely related to the subjective impressions of users and which can more easily be transformed into an objective method. This method will have to be used by Administrations in the future.

Nevertheless, in view of the existence of a considerable volume of planning data and Recommendations based on reference equivalents, Study Group XII has recommended the provisional adoption of the new concept of the "corrected reference equivalent". Corrected reference equivalents give the same results as the new subjective method and can easily be calculated from the "traditional" reference equivalents.

- b) Study Group XII has also collected a large amount of data on the effects of noise, echo, attenuation distortion, non-linear distortion, quantizing distortion and audio-frequency band limitations. The aim is to bring up to date the Recommendations which are intended to control impairments affecting the quality of international connections. These data also serve for the preparation of computer calculable models capable of supplying transmission quality ratings corresponding to all possible combinations of impairment factors.
- c) Loudspeaker sets are widespread. Their transmission quality should be specified and they should be prevented from overloading the telephone network. That is the purpose of new Recommendation P.34.
- d) Finally, Study Group XII continued to collaborate with the IEC (TC29) by exchanging information on artificial mouths and ears and delimiting areas of activity in the study of the connection of hearing aids to telephone sets.

3.2.5 *Telephone circuits*

During the past study period, Study Group XVI devoted most of its time to the planning of maritime mobile-satellite systems from the point of view of transmission and of their integration in the public network (Recommendation G.473), and to the integration of digital systems in the public network. It did not, however, limit its activity to those two Questions. The study of 7 out of 13 Questions was completed during the period and several new Recommendations were prepared.

3.2.6 *Circuit noise and availability*

The CMBD made appreciable progress during the study period 1977-1980. The new Recommendation G.106, containing a list of definitions and concepts and a definition of the relationships between the various concepts, provides a frame of reference for the application and evaluation of all new contributions. A considerable amount of data has also been collected on outages. Progress in these studies can thus be expected to accelerate during the next study period.

A new Recommendation G.215 was drafted, defining a hypothetical reference connection for countries with large territories. Nevertheless, the study of a longer hypothetical reference circuit must be continued during the next period.

3.2.7 *Maintenance*

Study Group IV is responsible for the study of all problems concerning the maintenance of transmissions on lines, circuits and international circuit chains, as well as the maintenance of automatic and semi-automatic telephone networks.

During the study period 1977-1980, Study Group IV undertook this work by means of five autonomous working parties, whose terms of reference are summarized briefly below:

- maintenance of telephone-type circuits,
- measuring instruments,
- general maintenance organization,
- quality of the international network,
- maintenance of groups, supergroups, etc. and new systems.

The Study Group has also assigned a number of studies to small specialized groups with the following terms of reference:

- studies of maintenance methods and maintenance equipment for radio and television circuits;
- evaluation of the availability of international leased circuits;
- maintenance of maritime-satellite systems operating in the international network.

As a detailed application of all the work listed above, Study Group IV has investigated transmission quality on the international network by making a statistical analysis of the results of measurements carried out by the maintenance staff of various Administrations; it has also made a series of brief observations of transmission over a test network specially installed between the various countries participating in the measurement campaign.

3.2.7.1 Study Group IV devoted particular attention to the steps to be taken to maintain the transmission quality offered to the users of transmission systems.

In this connection it considered the parameters to be defined for the maintenance of leased circuits for the transmission of digital signals. Particular importance was attached to the specifications of the measuring instruments used for the maintenance of PCM transmission systems and to automatic measuring instruments which can be used to make routine maintenance measurements on transmission circuits.

3.2.7.2 Through Special Rapporteurs, Study Group IV also took part in certain studies undertaken in other CCITT Study Groups.

The Study Group maintains close relations with the European Broadcasting Union.

3.3 *Study Groups dealing with telephone switching, signalling and operation and with tariffs*

3.3.1 *CCITT signalling system No. 7*

The specifications of signalling system No. 7 have now been defined. It is a common channel system (CCS):

- which can be applied internationally as well as nationally,
- which is optimized for operation on digital transmission networks between SPC (stored programme control) exchanges,
- which can be used for an integrated services network, and
- which is capable of handling not only the normal traffic between exchanges but also network management and maintenance traffic between special management and maintenance control exchanges.

The parts of system No. 7 dealing with "message transfer" and "use for telephony" were developed by Study Group XI. The part on "use for data transmission" was developed by Study Group VII, with close cooperation between the engineers responsible for the studies in the two Study Groups.

3.3.2 *Interworking of signalling systems*

All the two-by-two arrangements of CCITT standardized signalling systems are now very precisely specified for all cases liable to be met with in the international network.

Interworking conditions are described and specified in accordance with the formal rules of description by means of diagrams using the CCITT Specification and Description Language (SDL), so that interpretation is free of the ambiguities and difficulties that arise in spoken languages.

The conditions required at the interface between the terrestrial telephone network and maritime mobile-satellite systems have been defined, and it will shortly be possible to inaugurate the automatic service over a satellite link between terrestrial network subscribers and ships.

3.3.3 *Digital switching*

There now exist Recommendations defining CCITT specifications for digital international or national *transit* exchanges.

The preparation of draft Recommendations for local digital exchanges has reached a fairly advanced stage, but the relevant studies will probably not be completed until the end of the next study period.

These digital exchanges are essentially intended for telephone operation, but their specifications have already been drafted with a view to their use not only in the integrated digital network but also in an integrated services network.

3.3.4 *Software and languages*

Three languages have been developed by the CCITT:

a) *CHILL (the high level programming language for SPC exchanges)*

Very strict requirements had to be met in developing the CHILL language:

- flexibility so that it can be adapted to all types of equipment and to various fields of application;
- the development of modular and structured programmes;
- efficiency;
- ease of use and learning;
- etc.

This software language is, of course, independent of the "hardware". Although CHILL was primarily developed for SPC telephone exchange programming, it is sufficiently general to be used for other purposes, such as switching for data transmission, message switching, packet switching, etc.

b) *Man-machine language*

A CCITT Man-Machine Language (MML) has now been completely defined. It is designed to facilitate the execution of operational and maintenance functions of SPC switching systems of different types.

c) *The Specification and Description Language (SDL)*

The Specification and Description Language (SDL) consists in the graphical presentation of specifications and the description of the internal logic of stored programme control (SPC) telephone exchanges.

3.3.5 *Telephone operation*

Study Group II has carried out detailed studies of international telephone routing and numbering plans, traffic engineering and international telephone network management, and the human factors associated with automatic telephone operation, which have led to the drafting of new Recommendations or the revision of existing Recommendations.

3.3.5.1 *Routing plan*

Study Group II had to recognize that the routing procedures currently used on the international telephone network in no way complied with the Recommendation "International Routing Plan" drafted in 1964.

This situation, already noted for many years past by international planning specialists, arose for a number of reasons.

The aim of the new CCITT "Routing Plan" is to introduce a number of elementary rules indispensable for ensuring the quality of connections and capable of being adapted to the various situations arising in network management.

3.3.5.2 *Numbering plan*

A series of amendments have been made to the existing Recommendations on the World Numbering Plan:

- providing directives on the allocation of new country codes in view of the diminution in the number of such codes still available;
- standardizing the group 00 as the code providing access to the international network (i.e. as “international prefix”);
- standardizing the digit 0 as the national code providing access to the trunk network; and
- specifying the provisions to be introduced when a country adopts specifications concerning the capacity of its international registers.

For the Maritime Mobile Service, a *ship station identification plan*, which in fact forms part of the Numbering Plan, has been drawn up in close cooperation with Study Group I and the Working Parties of CCIR Study Group I and the Working Parties of CCIR Study Group 8 (Mobile Services). A feature of this plan is that it constitutes a digital ship station identification system which is the same both for the radiotelephony and for the radiotelex services.

A new Recommendation defining the “numbering and dialling procedures numbering plan for VHF/UHF and maritime mobile satellite telephone services” was forwarded to the World Administrative Radio Conference (WARC-79).

3.3.5.3 *Traffic engineering*

A thorough revision of Recommendation E.500 “Measurement and recording of traffic” will make it possible in future to define the loading levels to be associated with grade of service standards and to specify the traffic data to be collected. Loading levels are specified separately for circuit groups and for exchanges, and the loading levels relating to traffic flow have been differentiated from those relating to the number of call attempts.

Study Group II has given particular attention to the grade of service at exchanges with a view to providing the necessary advice for the work of GAS 6. Series of values have been defined and are incorporated in a new Recommendation.

A revision of Recommendation E.502 suggests two different methods of forecasting international telephone traffic, namely, the method of direct forecasting in erlangs and the composite forecasting method. The latter uses certain conversion coefficients for estimating the traffic offered during the busy hour on the basis of *forecasts* of the number of charged minutes derived from the *accounting data* exchanged between Administrations in international accounting operations.

“Network management” involving highly sophisticated procedures and equipment appeared on the scene some 10 years ago, but it then applied solely to the management of a national network completely controlled by a single operating agency. It has now gone beyond the national framework and for the last four or five years has been used experimentally on the busiest arteries of the international network, especially the intercontinental network. Tests relating to the introduction of international network management, with rerouting of calls either on a pre-planned basis or impromptu to meet exceptional situations, are being carried out by a working team of Study Group II under the title “Network Management Field Trials” (NMFT). Fifteen countries are now taking part in the NMFT trials.

Recommendation E.410 contains guidelines for international network management. A new criterion “rate of seizures with reply” has been added and the Recommendation has been substantially redrafted.

3.3.5.4 *Human factors*

Study Group II’s investigations have resulted in some partial standardization (reflected in a new Recommendation and amendments to an existing Recommendation) but will doubtless have to be continued for a long time to come.

3.3.6 *General tariff principles*

The VIth Plenary Assembly assigned to Study Group III the study of all tariff problems in the various international telecommunication services (public telegram service, telex service, telephone service, facsimile service, leased circuit service).

The four Regional Tariff Groups – TAF, TAL, TAS and TEUREM – which are permanent autonomous groups for the study of tariff problems at regional level, are organically attached to Study Group III. Since the VIth Plenary Assembly, this has also been the case of the UMI (International Monetary Unit) Working Party which was set up specifically to study the question concerning the international monetary unit assigned to the CCITT by the ITU Administrative Council.

Study Group III met three times during the study period, while its Working Parties held about a dozen meetings during the same period.

Two of the four Regional Tariff Groups – TAL and TEUREM – met during the study period; the two other Groups – TAF and TAS – encountered certain difficulties in organizing meetings in their respective regions.

The study of tariff questions constitutes a specific activity within the CCITT. Tariff problems are always thorny and difficult to solve on account of their immediate and substantial financial implications for Administrations and

recognized private operating agencies. This explains the great diversity of views sometimes expressed at meetings and the difficulties encountered in arriving at a general consensus on proposed amendments to existing Recommendations and in drafting new Recommendations. Great progress has nevertheless been made in examining the Questions, particularly with regard to tariffs for the new services.

During the study period, Study Group III's activities were focussed on the following five main points:

- leasing of international private telecommunication circuits;
- tariffs and international accounting for data transmission services over public data networks;
- tariffs and international accounting in the telegraph services;
- tariffs and international accounting in the facsimile services; and
- an international monetary unit.

3.3.6.1 *Leasing of international private telecommunication circuits*

After long discussions, a new draft Recommendation, designed to supplement Recommendation D.1, was prepared, laying down general principles for the provision of international telecommunication facilities to organizations formed to meet the specialized international communication needs of their members. The purpose of this unquestionably important draft Recommendation is to regulate the establishment of private international telecommunication networks by specialized organizations.

Many other aspects of problems connected with the leasing of international private circuits have been identified, but their study will have to be continued during the next study period.

3.3.6.2 *Tariffs and international accounting for data transmission services over public data networks*

Study Group III has made a close and extremely detailed study of the tariff principles to be applied to data transmission services provided over *public data networks*.

These studies led to:

- a) the revision of Recommendation D.10 on general tariff principles for data transmission on public networks dedicated to this type of transmission, which was considerably expanded in order to include tariff provisions relating to the interworking of different public services;
- b) the preparation of three new draft Recommendations on:
 - special tariff principles for packet-switched public data transmission services by means of the virtual call facility;
 - a measurement unit for charging by volume in the international packet-switched data transmission service (segment of 64 octets);
 - special tariff principles for the public international circuit-switched data transmission service by means of public data networks.

3.3.6.3 *Tariffs and international accounting in the telegraph services*

Tariffs and international accounting in the telegraph services have already in the past been the subject of numerous studies, not all of which produced the expected results, but substantial progress has been made in this field through the studies of a Study Group III Working Party which carried out, not without long discussions and controversy, an extensive survey of Administration practices.

Two draft Recommendations have been prepared on the public telegram service:

- the first lays down the general tariff principles applicable to telegrams exchanged through the international public telegram service;
- the second recommends the introduction into the international public telegram service of a system of charging and accounting by zones.

After considerable controversy, a draft Recommendation on the telex service was prepared, laying down the procedures for sharing the accounting rate in the intercontinental telex service by distinguishing between the different cases of traffic routing.

3.3.6.4 *Tariffs and international accounting in the facsimile services*

The very marked revival of activity in the facsimile services on an international scale led Study Group III, through an Ad Hoc Working Party, to prepare two draft Recommendations:

- one on the general tariff principles applicable to the international facsimile service between public bureaux (Bureaufax service); and
- the other on the general tariff principles applicable to the international public facsimile service between subscriber stations (Telefax service).

3.3.6.5 *International monetary unit*

A new Recommendation defines an interim procedure for the payment of international telecommunication accounting balances aimed at meeting current requirements in monetary transactions, since the use of the gold franc is no longer compatible with the provisions adopted in a large number of ITU Member states which belong to the International Monetary Fund (IMF). This interim procedure, which provides a choice between the use of IMF Special Drawing Rights (SDR) and the unilateral fixing of a gold franc value for converting accounting balances expressed in gold francs into the currency of payment, should meet the requirements of all Administrations and recognized private operating agencies. The Recommendation in question, which was submitted to the accelerated procedure for provisional approval, was approved in September 1978.

It remains for Study Group III to examine the problem of the monetary unit to be used for rate fixing and, in the long term, the definitive adoption of a new monetary unit.

3.4 *Study Groups dealing with protection*

3.4.1 *Protection against dangers and disturbances of electro-magnetic origin*

This aspect of protection is studied by Study Group V. The work of the Study Group during the present period has resulted in modifications of the K Series Recommendations and in drafting of two new Recommendations, namely, "Joint use of trenches and tunnels for telecommunication and power cables" and "Methods for estimating induced voltage from radio station emissions and for reducing interference".

Study Group V also drew up new texts for inclusion in the "Directives concerning the protection of telecommunication lines against harmful effects from electricity lines", including material on auto-transformers used on traction lines and in active reduction systems.

Study Group V continued its cooperation with Study Groups XII, XV and XVI in the study of questions of common interest. It also maintained close contact with such international organizations as CIGRE, IEC, UIC and UNIPED.

3.4.2 *Protection and specification of cable sheaths and poles*

As a result of studies in the previous period, the Study Group VI published in 1978 a Handbook on "Jointing of plastic-sheathed cables".

The main results of the work of Study Group VI during the present study period are:

- the draft of a Handbook on "Jointing of communication cable conductors". It is proposed that the Handbook should be published in the next study period;
- a text on "Cables with plastic-insulated conductors" which will be included in the "Recommendations concerning the construction, installation and protection of telecommunication cables in public networks";
- a text on "Protection of waveguide lines against corrosion" for inclusion in the "Recommendations".

An exhibition of cable jointing techniques was held during the final meeting of Study Group VI in order to familiarize members with current practices.

3.5 *World and Regional Plan Committees*

The report on the Plan Committees is contained in Document AP VII-No. 28²⁾.

The decisions taken by the World Plan Committee concerning future activities of the Plan Committees, as adopted by the Plenary Assembly, are reproduced in Appendix I.

3.6 *CCITT activities in the field of Technical Assistance – Work of the Special Autonomous Groups (GAS)*

3.6.1 *Economic and technical comparison of transmission systems (GAS 3)*

In addition to the final texts of the new Handbook on General Network Planning, further texts were studied and drawn up for the Handbooks on "Rural Telecommunications" and "Economic and technical aspects of the choice of transmission systems". These additional texts are to be published during the forthcoming period.

3.6.2 *Economic studies at the national level in the field of telecommunications (GAS 5)*

The VIth CCITT Plenary Assembly assigned six subjects for study by Special Autonomous Group No. 5 (GAS 5), five of which should normally result in the preparation of new economics Chapters. At the end of the study period, five new Chapters had been finalized:

- special aspects of telecommunications development in isolated and/or underprivileged areas of countries;
- methods used in long-term forecasting of domestic telecommunications demand and required resources (overall and by main sector);

²⁾ Report adopted at the second Plenary Meeting.

- market factors affecting telecommunication demand;
- procedure for establishing a budget model for a telecommunication undertaking;
- conditions required for the establishment of a national industry for the manufacture of telecommunications equipment (especially switching equipment).

As its sixth subject, GAS 5 was asked to examine the statistical data published in the “Yearbook of common carrier telecommunication statistics” and to determine what improvements might be made. This task was completed and a draft revision of Recommendation C.1, pursuant to which the statistical Yearbook is published, is submitted for approval to the VIIth Plenary Assembly.

The statistical Yearbook has been somewhat expanded and some of the items have been modified; GAS 5 has also sought to define as clearly as possible the data to be included in the Yearbook so that they are comparable internationally.

GAS 5 took the view that a Ghanaian proposal for the publication of a booklet containing information on the national telecommunication tariffs in force in the ITU Member countries would be very useful, in particular for the developing countries.

For this purpose, a draft new Recommendation C.2 was prepared specifying the tariff information to be published. This information (expressed in national currencies) has deliberately been limited and has been so selected as to be characteristic of the tariff systems of the individual countries and to give a sufficiently clear idea of those systems.

3.6.3 *Economic and technical aspects of the choice of telephone switching systems (GAS 6)*

The terms of reference assigned to GAS 6 when the VIth Plenary Assembly set it up were to prepare a Handbook on the “Economic and technical aspects of the choice of telephone switching systems”.

The Handbook has 9 Chapters. The “case studies” of networks will be published separately so that they can be associated with both the GAS 6 Handbook and the GAS 3 Handbook referred to above.

GAS 6 has done a considerable amount of work commensurate with the importance attached to the subject when it was discussed at the VIth Plenary Assembly.

4 **Publication of the CCITT Books**

4.1 Following its establishment and organization in 1975, the first major task of the Department of Technical Services (Editing) was to oversee production of the *Orange Book*. This entailed development of new and improved systems and procedures in cooperation with the Common Services and Computer Department of the ITU General Secretariat. The effectiveness of these work methods was demonstrated by the production of the entire *Orange Book* within one year after the VIth Plenary Assembly.

During the study period, two additions to the *Orange Book* were developed. The first, a comprehensive index, provides access by Recommendation or alphabetic order with cross references.

The second is a list of terms and their definitions used by the Study Groups in the various Recommendation Series. Both of these will be produced concurrently with the CCITT Book in future.

4.2 Since producing the *Orange Book*, a number of Handbooks have been produced or revised in part or in total by the Department and the titles of these are as follows:

- a) Recommendations concerning the construction, installation and protection of telecommunication cables in public networks.
- b) Jointing of plastic-sheathed cables.
- c) National telephone networks for the automatic service.
- d) Directives concerning the protection of telecommunication lines against harmful effects from electricity lines.
- e) Protection of telecommunication lines and equipment against lightning discharges.
- f) Local network planning.
- g) Rural telecommunications.

Other publication work concerned a number of new or revised Recommendations which were produced and provisionally approved during the study period. These arose from needs for standards in the rapidly developing areas of data communications in public and private networks (V and X Series Recommendations).

4.3 Production methods and techniques have been closely studied in the Department and new presentation standards and hierarchical numbering systems have been developed as a result. These developments and a continuing close liaison with the Computer Department have resulted in improved presentation of texts and have facilitated their computerization, manipulation and retrieval.

4.4 There has been a resurgence of interest in terminology consequent to the many recent developments in telecommunications. Coordination of CCITT terminology matters has been centralized in the Department of Technical Services which will be able to extract terms from the computerized data base of the CCITT Book and will provide a number of services to Study Groups in this area.

APPENDIX I

Future activities of the Plan Committees

1 Decisions of the World Plan Committee

1.1 All the Regional Plan Committees considered their future activities and the future development of their work with a view to facilitating the planning tasks of the regional and interregional networks and to increasing reliability and efficiency, taking into account the specific characteristics of each region.

At its Paris meeting (April, 1980) the World Plan Committee undertook a detailed examination of the future and terms of reference of the Plan Committees. The points on which there was general agreement are given below together with the conclusions arrived at. These should be regarded as the considered views of the World Plan Committee on the mandate and future activities of the Plan Committees.

1.2 At its Geneva meeting in 1975, the World Plan Committee considered the Plan Committees' terms of reference and future activities in detail. Having regard to the report of that meeting³⁾, the VIth CCITT Plenary Assembly (Geneva, 1976), after a wide-ranging debate, adopted Resolution No. 12, which confirms that "the existing terms of reference of the Plan Committee as laid down in No. 78 of the Convention (Malaga-Torremolinos, 1973) and amplified in Resolution No. 448 of the Administrative Council continue to be relevant" and emphasizes that "the Regional Plan Committees and the World Plan Committees have a valuable function to perform and should be retained".

This Resolution of the VIth Plenary Assembly has also guided the Plan meetings in a direction more in keeping with the aspirations of the Committees' members.

1.3 During the study period 1977-1980, the meetings of the Regional and World Plan Committees not only concerned themselves with the Plan data, but also provided an opportunity for very full exchanges of information on the development of the telecommunication networks in the countries concerned.

The large attendance at these meetings and the number of contributions submitted to the Committees attest to the interest of ITU Members in such meetings.

1.4 Thanks to the use of the computer and the steady improvement in the preparation of replies to the questionnaires, the Plan data have become increasingly reliable and may be used not only by Administrations and recognized private operating agencies when, in the full exercise of their sovereignty, they conclude agreements with a view to organizing or improving international services between their respective countries, but also by research departments and by other international organizations.

The ITU computer constitutes the data bank from which data for the publication of the Plan Books and their supplements may be extracted.

The presentation and the publication of the Plan Books increasingly meet the needs of planning technicians and their regular issue (every two years) is an advantage.

1.5 The organization of forums (in the form of "round tables" or "study days") and the participation of the Chairmen of CCI Study Groups as lecturers at the Plan meetings are entirely in keeping with the spirit of Administrative Council Resolutions No. 448 and No. 78 of the Convention.

The purpose of these round tables or study days is to assist the World and Regional Plan Committees in the performance of their tasks, to determine the prospects for the development of the worldwide telecommunication networks, including space communications and submarine cables, and to recommend the main technical decisions which should be taken to ensure this development.

It is expected that the papers read and the debates held in these study days will help countries to update their general planning techniques and to introduce new services and new possibilities.

1.6 The Plan meetings provide an opportunity for indispensable direct bilateral and multilateral contacts among the representatives of Administrations and more generally among participants to discuss questions of mutual interest on the planning and coordinated development of telecommunication networks.

³⁾ Documents AP VI-Nos. 33 and 75.



To facilitate these contacts, it would be useful if some time could be set aside at World Plan Committee meetings for bilateral contacts as this activity should not interfere with the normal work of the Committee nor increase the duration of its meetings.

1.7 The Plan and charts should be established with a minimum of manpower and effort and with computer assistance. Efforts should be made to retain only absolutely essential information so as to allow for more frequent updating and to increase the practical value of these documents. The publication of these data should be accelerated.

1.8 As in the past, sufficient time should be allowed for papers and discussion of the problems encountered by the countries of the regions.

2 Proposals to the VIIth CCITT Plenary Assembly

In view of the foregoing, the World Plan Committee, Paris, 1980, requests the VIIth CCITT Plenary Assembly:

- i) to retain Resolution No. 12 as published in the *Orange Book* (the last paragraph on page 207, *Orange Book*, Vol. I, and the sentence "this view virtually represents a retention of the status quo as far as location of meetings is concerned" in § 1.9 should be deleted); (see § 4 below);
- ii) to propose to the next Plenipotentiary Conference that No. 78 in article 11 of the Convention (Malaga-Torremolinos, 1973) should be retained unchanged;
- iii) to maintain the World and Regional Plan Committees and their terms of reference;
- iv) to instruct the Director of the CCITT to organize the Plan meetings, as in the past;
- v) to request administrations and recognized private operating agencies to participate fully in the Plan meetings and to propose improvements ensuring that activity at these meetings promotes the development of modern telecommunication techniques.

ANNEX A

List of the meetings of CCITT Study Groups and Working Parties held during the 1977-1980 study period

I – Study Groups

Study Group I – Telegraph operation and quality of service

20-24 June 1977	Plenary meeting
8-9 May 1978	Videotex Working Party
13-21 June 1978	Plenary meeting
17-19 October 1978	Videotex Working Party
17-25 October 1978	Videotex Working Party
25 October-3 November 1978	Teletex Working Party
8-18 January 1979	Telex Rapporteur's Group, Videotex Working Party and Facsimile Service Rapporteur's Group
20-23 March 1979	Teletex Service Rapporteur's Group
17-25 May 1979	Plenary meeting
15-17 October 1979	Working Party
15-19 October 1979	Videotex Service Working Party, Teletex Service Rapporteur's Group and Facsimile Service Rapporteur's Group
6-9 November 1979	Rapporteurs' Group on Question 11/I
28 January-1 February 1980	Working Party on Question 8/I
9-20 June 1980	Final meeting

Study Group II – Telephone operation and quality of service

4-10 May 1977	Plenary meeting
15-19 May 1977	Ad Hoc Joint Working Party of Study Groups I and II on ship station identification
19-22 September 1977	Working Party II/2 (Human factors)
16-17 November 1977	Ad Hoc Joint Working Party of Study Groups I and II on ship station identification
17-22 November 1977	Working Party II/3 (Numbering and routing)
23-29 November 1977	Working Party II/4 (Traffic engineering and international network management)

20-23 March 1978	Working Party II/1 (Telephone operation, instructions, regulations)
11-13 September 1978	Plenary meeting
26 February-2 March 1979	Working Party II/4 (Traffic engineering and international network management)
5-8 March 1979	Working Party II/3 (Telephone numbering and routing)
14-17 May 1979	Sub-Group on Question 2/II (Computerization of directory inquiries services)
10-14 September 1979	Working Party II/2 (Human factors)
12 September 1979	Sub-Group on Question 14/II (Standardization of tones)
29-30 October 1979	Working Party on Vocabulary
6-7 March 1980	Working Party II/3 (Telephone numbering and routing) and Sub-Group on Question 21/II (Study of supplementary telephone services)
10 March 1980	Sub-Group on Question 14/II (Standardization of tones)
10-12 March 1980	Working Party II/4 (Traffic engineering and international network management)
11-12 March 1980	Working Party II/2 (Human factors)
13-20 March 1980	Final meeting

Study Group III – General tariff principles

1-4 March 1977	Preparatory meeting
21-26 April 1977	Working Party UMI
27 April-3 May 1977	Plenary meeting
6-10 February 1978	Working Party III/3 (Charging and accounting in the international telegraph service)
24-28 April 1978	Working Party III/2 (Tariff principles for data transmission public networks)
1-3 May 1978	Working Party III/1 (Private leased circuits)
4-12 December 1978	Plenary meeting
14-17 February 1978	Working Party UMI
19-23 March 1979	Working Party III/3 (Charging and accounting in the international telegraph service)
30 April-3 May 1979	Working Party III/2 (Tariff principles for data transmission public networks)
7-10 May 1979	Working Party III/1 (Private leased circuits)
11 May 1979	<i>Ad Hoc</i> Group on facsimile tariffs (Question 12/III)
4-7 December 1979	<i>Ad Hoc</i> Group on facsimile tariffs (Question 12/III)
18-24 April 1980	Final meeting

Study Group IV – Transmission maintenance of international lines, circuits and chain of circuits; maintenance of automatic and semi-automatic networks

28-29 March 1977	Working Party IV/4 (Quality of the international network)
30 March-1 April 1977	Working Party IV/1 (Maintenance of telephone-type circuits)
4-5 April 1977	Working Party IV/2 (Measuring instrument specifications)
31 August-2 September 1977	Working Party IV/5 (Maintenance of groups, supergroups, etc. and new systems)
5-7 September 1977	Working Party IV/3 (General maintenance organization)
26 June-7 July 1978	Working Party IV/2 (Measuring instrument specifications)
	Working Party IV/3 (General maintenance organization)
	Working Party IV/1 (Maintenance of telephone-type circuits) and <i>Ad Hoc</i> Ra/TV Working Party
19-22 September 1978	Working Party IV/4 (Quality of the international network)
25-29 September 1978	Plenary meeting
2-6 April 1979	Working Party IV/5 (Maintenance of groups, supergroups, etc. and new systems)
9-11 April 1979	Working Party IV/3 (General maintenance organization)
23-26 April 1979	<i>Ad Hoc</i> Ra/TV Working Party
17-18 May 1979	Group of Experts on Question 22/IV (Availability of international circuits)
21-25 May 1979	Working Party IV/1 (Maintenance of telephone-type circuits) and Working Party IV/2 (Measuring instrument specifications)
24-26 September 1979	Special Rapporteur's Group on maritime satellite systems
27 September-4 October 1979	Editorial Group on Volume IV
15-19 October 1979	Group of Experts on Question 22/IV (Availability of international circuits)
27 February-4 March 1980	Working Party IV/1 (Maintenance of telephone-type circuits); Working Party IV/2 (Measuring instrument specifications); Working Party IV/4 (Quality of the international network);

	Working Party IV/5 (Maintenance of groups, supergroups, etc. and new systems) and Group of Experts on Question 22/IV (Availability of international circuits)
5-12 March 1980	Final meeting
21-28 March 1980	Editorial Group on Volume IV

Study Group V – Protection against dangers and disturbances of electromagnetic origin

2-3 March 1978	Preparatory meeting on Question 10/V (Booster transformers and autotransformers)
6-10 March 1978	Plenary meeting
18-20 April 1979	Group of Special Rapporteurs
23-25 April 1979	Editorial Group on the Directives
24-25 January 1980	Editorial Group on the Directives
28 January-1 February 1980	Final meeting

Study Group VI – Protection and specifications of cable sheets and poles

13-17 March 1978	Plenary meeting
17-20 October 1978	Working Party on Question 7/VI (Methods for making conductor joints)
4-8 February 1980	Final meeting

Study Group VII – New networks for data transmission

22-26 November 1976	Special Rapporteurs' Groups on packet switched service
19-26 April 1977	Plenary meeting
25-28 October 1977	Working Party on Recommendation X.25
2-4 November 1977	Working Party on Question 18/VII
22-24 November 1977	Working Party on Recommendation X.21
3-7 April 1978	Working Party VII/4 (Transmission, maintenance and quality of service)
6-7 April 1978	Meeting on Recommendations X.21, X.21 bis, X.20, X.20 bis and X.24 - Multiplexed link
10-14 April 1978	Working Party VII/2 (Interfaces)
17-21 April 1978	Working Party VII/3 (User requirements and service features) and Working Party VII/1 (Switching and signalling)
24-25 April 1978	Plenary meeting
1-3 November 1978	Preparatory meeting – Recommendation X.21
20 November 1978	Group of Special Rapporteurs on Question 36/VII
27 November-6 December 1978	Group of Special Rapporteurs on Recommendations X.25 and X.75 and on the datagram service
5-8 December 1978	Group of Rapporteurs on Question 18/VII
13-16 February 1979	Group of Special Rapporteurs
17-18 April 1979	Groups of Special Rapporteurs
19 April-2 May 1979	Working Party on New networks for data transmission
5-12 September 1979	Group of Special Rapporteurs – Multi-level models
10-11 September 1979	Group of Special Rapporteurs – Recommendations X.3, X.28 and X.29
12-14 September 1979	Group of Special Rapporteurs – Recommendation X.25
9-12 October 1979	Group of Special Rapporteurs – Recommendation X.75
23-25 October 1979	Group of Special Rapporteurs – Recommendation X.25
5-8 February 1980	Working Parties VII/1, VII/2, VII/3, VII/4 and Working Party on Question 15/VII
11-15 February 1980	Final meeting
12-20 May 1980	Group of Special Rapporteurs – Multi-level models

Study Group VIII – Telegraph and terminal equipment, local connecting lines

4-6 May 1977	Plenary meeting
22-24 November 1977	Teletex Service Rapporteur's Group
18-21 April 1978	Working Party Teletex
22-28 June 1978	Plenary meeting
23-25 October 1978	Working Party Videotex
30 January-2 February 1979	Teletex Terminals Rapporteur's Group
27 February-1 March 1979	Working Party on Question 11/VIII
3-11 May 1979	Plenary meeting
14-16 May 1979	Symposium on new telecommunication services
15-17 October 1979	Working Party of Study Groups VII, VIII and XIV on Level 4
27-29 November 1979	Working Party Videotex
11-14 December 1979	Teletex Terminals Rapporteur's Group
21-29 January 1980	Working Party teletex control procedures – Question 8/VIII
30 January-1 February 1980	Special Group on Level 4

18-22 February 1980	Working Party on Question 8/VIII
17-21 March 1980	Working Party on Question 8/VIII
14-19 April 1980	Working Party on Question 8/VIII
21-25 April 1980	Editorial Group on Question 8/VIII
2-11 June 1980	Final meeting

Study Group IX – Telegraph transmission quality; specification of equipment and rules for the maintenance of telegraph channels

31 October-4 November 1977	Plenary meeting
9-17 November 1978	Plenary meeting
4-6 December 1979	Working Party on Question 24/IX
10-14 December 1979	Working Party
19-23 May 1980	Final meeting

Study Group X – Telegraph switching

7-11 November 1977	Plenary meeting
5-6 September 1978	Group of Rapporteurs on Question 4/X
8-13 September 1978	Plenary meeting
10-14 September 1979	Joint meeting of Study Groups X and I on the introduction of new facilities for telex
3-7 December 1979	Working Party
12-16 May 1980	Final meeting

Study Group XI – Telephone switching and signalling

11-19 May 1977	Plenary meeting
22 November-9 December 1977	Working Party on questions relating to interworking, signalling and switching
30 May-2 June 1978	Sub-Group of "contributors" to the study of Question 5/XI
5-9 June 1978	Working Party
12-16 June 1978	Plenary meeting
19-23 June 1978	Working Party
12-17 November 1978	Group of Experts on signalling system No. 7
8-12 January 1979	Working Party XI/1 (Interworking, satellites)
15-19 January 1979	Editorial Group on signalling system No. 7
15-19 January 1979	Working Party XI/4 (Digital switching)
22-26 January 1979	Working Party XI/2 (Common channel signalling for integrated digital networks)
12-23 February 1979	Working Party XI/3 (SPC languages)
2-6 April 1979	Working Party XI/5 (Automatic switching equipment for use in national networks)
16-23 May 1979	Sub-Group XI/3-4 SDL
13-20 June 1979	Group of Experts on signalling system No. 7
21-28 June 1979	Working Party XI/1 (Interworking, satellites) and Working Party on Question 5/XI
27 August-14 September 1979	Working Parties XI/1, XI/4 and Group of Experts on signalling system No. 7
18-21 September 1979	Group of Experts on signalling system No. 7
18-22 September 1979	Implementors' Forum
24 September-11 October 1979	Working Party XI/3 (Languages for SPC telephone exchanges)
1-11 October 1979	Sub-Group of Working Party XI/3
5-9 November 1979	Working Party XI/2 (Common channel signalling for integrated digital networks)
12-16 November 1979	Editorial Group on Question 5/XI
17-20 March 1980	Editorial Group on Working Party XI/2
21 March-3 April 1980	Final meeting
25-26 March 1980	Coordination Group of Working Party XI/4

Study Group XII – Telephone transmission performance and local telephone networks

14-16 March 1977	Working Party Laboratory
23-24 June 1977	Working Party Laboratory
27-29 June 1977	Plenary meeting
1-3 March 1978	Working Party Laboratory
14-15 September 1978	Working Party Laboratory
18-22 September 1978	Plenary meeting
19-22 June 1979	Working Party Laboratory
25-29 June 1979	Plenary meeting
20-21 March 1980	Working Party Laboratory
24-26 March 1980	Final meeting

Study Group XIV – Facsimile telegraph transmission and equipment

14-18 November 1977	Plenary meeting
11-15 December 1978	Working Party
10-12 January 1979	Joint Group of Special Rapporteurs of Study Groups VIII and XIV – Common control procedures
26-28 March 1979	Joint meeting of Study Groups VIII and XIV – Common control procedures
27-30 March 1979	Joint Group of Special Rapporteurs of Study Groups VIII and XIV – Common control procedures
29-30 March 1979	Group of Special Rapporteurs
10-11 May 1979	Group of Special Rapporteurs
1-5 October 1979	Joint Group of Special Rapporteurs of Study Groups VIII and XIV – Common control procedures
7-15 November 1979	Plenary meeting
3-7 December 1979	Group of Special Rapporteurs of Study Groups VIII and XIV
2-9 May 1980	Final meeting

Study Group XV – Transmission systems

14-15 December 1976	Meeting of Chairman and Vice-Chairmen
21-29 March 1977	Plenary meeting
12-13 September 1977	Working Party on optical fibres
29-30 November 1977	Meeting of Chairman with Working Party Chairmen
3-14 April 1978	Meeting of Working Parties
23-24 October 1978	Working Party on optical fibres
20-23 February 1979	Working Party on echo suppressors
15-16 March 1979	Meeting of Chairman with Working Party Chairmen
25 June-13 July 1979	Plenary and Working Party meeting
25 February-4 March 1980	Final meeting

Study Group XVI – Telephone circuits

30 June-4-5 July 1977	Plenary meeting
25-29 September 1978	Plenary meeting
2-5 July 1979	Plenary meeting
27-31 March 1980	Final meeting

Study Group XVII – Data transmission

27 April-3 May 1977	Plenary meeting
12-16 December 1977	Working Party
21-29 November 1978	Working Party
11-19 September 1979	Working Party
27-29 November 1979	Group of Special Rapporteurs
25 April-1 May 1980	Final meeting

Study Group XVIII – Digital networks

7 November 1977	Meeting of Chairman and Vice-Chairmen
8-15 November 1977	Plenary meeting
9-20 October 1978	Working Party of Study Group XVIII
14-31 May 1979	Plenary and Working Party meeting
20 September 1979	Meeting of Chairman and Vice-Chairmen
8-17 April 1980	Final meeting

CMBD – Circuit noise and availability

6-8 July 1977	Plenary meeting
29-30 September 1978	Group of Special Rapporteurs on availability and reliability
2-6 October 1978	Plenary meeting
6-12 July 1979	Plenary meeting
1-3 April 1980	Final meeting

II – *Plan Committees**World Plan* – World Plan Committee

29-31 May 1979

Working Party of the World Plan Committee, Geneva

9-18 April 1980

Meeting of the World Plan Committee, Paris

Africa Plan – Plan Committee for Africa

26-30 March 1978

Plan Committee for the Development of Telecommunications in Africa, Abidjan

29-31 January 1980

Coordination Committee of the Plan Committee for Africa, Brazzaville

Latin America Plan – Plan Committee for Latin America

10-15 April 1978

Plan Committee for the Development of Telecommunications in Latin America, Lima

1-3 September 1980

Coordination Committee of the Plan Committee for Latin America, Santiago, Chile

Asia Plan – Plan Committee for Asia and Oceania

11-12 October 1976

Coordination Committee of the Plan Committee for Asia and Oceania, Geneva

28 November-2 December 1978

Plan Committee for the Development of Telecommunications in Asia and Oceania, Bangkok

Europe Plan – Plan Committee for Europe and the Mediterranean Basin

24-26 November 1976

Coordination Committee of the Plan Committee for Europe and the Mediterranean Basin, Geneva

6-10 February 1979

Plan Committee for the Development of Telecommunications in Europe and the Mediterranean Basin, Santiago de Compostela

III – *Joint Working Parties (GM)**GM LTG* – Use of telephone-type lines for purposes other than telephony

16-18 November 1977

Plenary meeting

20-22 February 1980

Final meeting

GM SSM – Maritime Mobile Service

21-29 March 1977

Plenary meeting

8-12 May 1978

Plenary meeting

12-16 March 1979

Plenary meeting

18-20 February 1980

Editorial Group

IV – *Special Autonomous Groups**GAS 3* – Economic and technical aspects of the choice of transmission systems

10-14 January 1977

Editorial Group on Rural Telecommunications

13-17 June 1977

Editorial Group

20-23 June 1977

Working Party

20-21 February 1978

Editorial Group on Rural Telecommunications

22-24 February 1978

Editorial Group on network planning at national level

28 August-6 September 1978

Plenary meeting

4-15 June 1979

Editorial Group

11-13 February 1980

Final meeting

14-25 April 1980

Meeting of authors of the Handbook on General Network Planning

9-13 June 1980

Working Party C

GAS 5 – Economic conditions and telecommunication development

21-23 February 1977	Plenary meeting
22-26 May 1978	Meeting of GAS 5 authors
29 August-6 September 1978	Plenary meeting
29 January-2 February 1979	Meeting of GAS 5 authors
27-30 May 1980	Final meeting

GAS 6 – Economic and technical aspects of the choice of switching systems

16-20 May 1977	Plenary meeting
6 March 1978	Chairmen, Vice-Chairmen and Rapporteurs of GAS 6
7-17 March 1978	Plenary meeting
29-31 August 1978	Working Party
14-18 May 1979	Plenary meeting
17-19 September 1979	Working Party on Chapter IV
17-19 September 1979	Joint GAS 6/GAS 3 meeting
17-21 September 1979	Working Party on Chapter VI
15-18 October 1979	Coordination Group and Working Party on Chapter IX
4-7 December 1979	Coordination Group
11-19 June 1980	Final meeting

V – Regional Tariff Groups of Committee III**GR TAL – Tariffs for Latin America**

13-14 April 1978	Plenary meeting
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GR TEUREM – Tariffs for Europe and the Mediterranean Basin

29 April 1977	Plenary meeting
13 February 1978	Plenary meeting
5-9 February 1979	Plenary meeting

VI – Meetings of Chairmen

3-5 October 1978	Meeting of the Chairmen of the Study Groups, Plan Committees, Joint Working Parties, GAS and Regional Tariff Groups
1-2 October 1979	Meeting of the Chairmen and Vice-Chairmen of the Study Groups and Plan Committees

ANNEX B

Participation of Member countries in meetings

COUNTRY (Administration or recognized private operating agency)	Study Groups and their Working Parties																		PLAN					Joint Working Parties			Special Autonomous Groups			Regional Tariff Groups				TOTAL		
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIV	XV	XVI	XVII	XVIII	CMBD	WORLD	AFRICA	LATIN AMERICA	ASIA	EUROPE													
	LTG	SMM	UMI	GAS 3	GAS 5	GAS 6	TAF	TAL	TAS	TEU- REM																										
Afghanistan																						x												1		
Algeria			x																x	x				x		x	x			x					7	
Germany (Fed. Rep. of)	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x			x				x			26	
Saudi Arabia												x			x				x			x						x							5	
Argentina	x		x					x											x		x														6	
Australia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x		x	x	x									23	
Austria	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x		x			x	x					x					x		23	
Bahrain																			x			x													2	
Bangladesh																						x													1	
Barbados																					x										x				2	
Belgium	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x		x				x		x	x	x		x				x		23	
Benin																			x	x															2	
Bolivia																					x										x				2	
Brazil	x	x	x				x		x		x	x	x	x			x		x		x				x	x	x				x			x	17	
Bulgaria							x							x		x	x		x				x												6	
Cameroon			x																x	x																3
Canada	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x						26	
Cap Verde																				x																1
Central African Republic																				x																1
Chile																			x		x										x				3	
China	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x		x		x	x								24	
Cyprus		x	x								x					x			x				x			x									7	
Colombia																					x										x				2	
Congo	x																		x	x															3	
Korea (Republic of)			x				x					x	x		x	x																			6	
Costa Rica																					x														1	
Ivory Coast																			x	x															2	
Cuba																			x		x										x				3	
Denmark	x	x	x	x	x	x	x	x	x		x	x	x	x	x		x	x	x				x		x	x		x	x					x	22	

COUNTRY (Administration or recognized private operating agency)	Study Groups and their Working Parties																		PLAN					Joint Working Parties			Special Autonomous Groups			Regional Tariff Groups				TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIV	XV	XVI	XVII	XVIII	CMBD	WORLD	AFRICA	LATIN AMERICA	ASIA	EUROPE											
	LTG	SMM	UMI	GAS 3	GAS 5	GAS 6	TAF	TAL	TAS	TEU- REM																								
Egypt												x				x		x															4	
United Arab Emirates																					x												1	
Ecuador																				x										x			2	
Spain	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x	x	x		x			x	29	
United States	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x				30	
Ethiopia																		x	x														2	
Finland	x	x	x		x		x	x		x	x	x		x	x	x	x	x	x				x			x	x					x	19	
France	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x		x			x	30
Gabon																		x	x														2	
Gambia																			x														1	
Ghana																			x														1	
Greece	x										x	x						x															5	
Guatemala			x																														1	
Guinea			x																x	x													3	
Guinea Bissau																			x														1	
Upper Volta																			x	x													2	
Honduras																					x		x										2	
Hungary	x	x	x	x	x	x	x		x		x	x		x	x	x	x	x	x							x	x					x	20	
India	x	x	x	x	x	x	x	x			x	x		x	x	x	x		x			x			x			x					18	
Indonesia										x				x					x			x					x	x					6	
Iran		x	x											x					x			x					x						5	
Iraq											x					x			x														4	
Ireland		x		x	x		x	x	x	x	x	x	x	x		x	x		x							x		x					16	
Israel			x	x																		x				x	x	x				x	8	
Italy	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x		x	31		
Japan	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x		x	31			
Jordan		x		x							x	x			x											x	x						8	
Kenya	x	x	x																x	x													5	
Kuwait											x								x			x											4	

COUNTRY (Administration or recognized private operating agency)	Study Groups and their Working Parties																			PLAN					Joint Working Parties			Special Autonomous Groups			Regional Tariff Groups				TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIV	XV	XVI	XVII	XVIII	CMBD	WORLD	AFRICA	LATIN AMERICA	ASIA	EUROPE	LTG	SMM	UMI	GAS 3	GAS 5	GAS 6	TAF	TAL	TAS	TEU- REM		
Lesotho																				x														1	
Lebanon		x																	x	x		x	x						x					6	
Liberia																				x					x									2	
Libya																				x														1	
Malaysia																			x			x												2	
Mali			x													x			x	x							x							5	
Morocco																			x								x							2	
Mauritius																				x														1	
Mexico							x										x				x		x				x				x			7	
Monaco		x																																1	
Mozambique																				x														1	
Nepal																						x												1	
Niger																			x	x														2	
Nigeria	x	x	x	x			x	x		x	x			x		x	x	x	x	x						x	x	x	x				x	19	
Norway	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x						x	25	
New Zealand	x										x	x			x		x	x										x						7	
Oman																			x															1	
Uganda		x	x								x								x	x								x						6	
Pakistan																			x			x												2	
Panama			x				x														x					x								4	
Paraguay	x																				x													3	
Netherlands	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x		x	x	x	x	x	x	x		x		x	29	
Peru																			x		x										x			3	
Philippines		x	x																x			x												4	
Poland			x				x				x	x	x	x	x	x		x	x				x			x		x					x	14	
Portugal	x	x	x	x	x	x		x	x	x	x		x	x		x	x		x				x	x	x		x	x					x	22	
Qatar																			x			x												2	
Syria							x																										x	2	
German Democratic Rep.	x	x	x		x	x	x				x	x		x		x			x				x		x	x		x					x	16	

5.2 – REPORT BY COMMITTEE A TO THE PLENARY ASSEMBLY*(as amended and approved by the seventh plenary meeting)***WORKING METHODS OF THE CCITT**

In accordance with paragraph 440 of the International Telecommunication Convention (Malaga-Torremolinos, 1973) the Plenary Assembly set up Committee A with the following terms of reference:

“Consideration of organization and working methods of the CCITT”

The following documents were reviewed by the Committee in fulfilling its mandate:

AP VII-No. 6	Final Report of Study Group VII
AP VII-No. 31	Amendments to Resolution No. 1
AP VII-No. 32	Amendments to Resolution No. 2
AP VII-No. 33	Proposals on CCITT organization and working methods
AP VII-No. 41	Report by the Director on organization of the CCITT Study Groups
AP VII-No. 71	Report by the Director on the activity of the CCITT between the VIth and VIIth Plenary Assemblies
AP VII-No. 82	Documents for CCI meetings
AP VII-No. 84	Working methods of the Study Groups
AP VII-No. 85	Working methods of the Plenary Assembly
AP VII-No. 87	Final Report Study Group VIII to the VIIth Plenary Assembly
AP VII-No. 94	Designation, terms of reference and organization of the work of Study Group I (1981-1984)
AP VII-No. 96	Report CMV to the VIIth Plenary Assembly
AP VII-No. 107	CCITT Study Group structures
AP VII-No. 109	Proposals for the organization of CCITT work on the ISDN and new services
AP VII-No. 110	Comments on the organization of the CCITT
AP VII-No. 111	Organization of the CCITT Plenary Assemblies
AP VII-No. 118	Final Report Study Group V to the VIIth Plenary Assembly
AP VII-No. 121	Text presentation standards for CCITT
AP VII-No. 126	Proposal on CCITT procedures on terminology

In addition to the above documents, the Committee also reviewed Temporary Documents of the Plenary Assembly relevant to its work as well as the Temporary Documents specifically addressed to the Committee.

The Committee at its first Plenary Meeting established two Working Parties, namely Working Party 1 and Working Party 2 under the chairmanship of the Vice-Chairmen of the Committee. The Working Party 1 and 2 mandates were respectively:

- organization of Study Groups, Joint Study Groups, Joint Working Parties and Regional Working Parties;
- revision of the Resolution No. 1 and Opinion No. 3.

Operational aspects of the work of the CCITT in the area of terminology were discussed by a small Working Group.

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PART I

Proposals made by Committee A**1 Organization of Study Groups**

Committee A decided to recommend to the Plenary Assembly:

- 1.1 The merging of Study Groups IX and X; the new Study Group should have the title "Telegraph networks and terminal equipment" and its terms of reference should include also the work concerned with telex terminals now assigned to the Study Group VIII.
- 1.2 The merging of Study Groups VIII and XIV; the new Study Group should have the title "Terminal equipment for telematic services¹⁾ (Facsimile, Teletex, Videotex, etc.)".
- 1.3 To amend the title of the Study Group I to "Definition and operational aspects of telegraph and telematic services¹⁾ (Facsimile, Teletex, Videotex, etc.)".
- 1.4 To amend the title of the Study Group VII to "Data communication networks".
- 1.5 To amend the title of the Study Group XVII to "Data communication over the telephone network".
- 1.6 The transfer to Study Group XV of the aspects of the work of Study Group XVIII related to cable transmission systems; the Questions which are decided to be transferred to Study Group XV are identified in the Document AP VII-No. 104, page 2, as Questions M/XVIII, N/XVIII, S/XVIII, T/XVIII, U/XVIII, and V/XVIII.
- 1.7 Maintaining of Joint Working Parties LTG and SMM.
- 1.8 Maintaining of Regional Tariff Groups TAF, TAL, TAS and TEUREM, it being understood that these Tariff Groups shall report to Study Group III.

Setting up of Special Autonomous Groups will be done by Committee D.

2 Organization of studies on ISDN

The Committee proposes that in the new study period the studies on various aspects of the ISDN should be carried out by the Study Groups I, II, III, IV, VII, VIII, X, XI, XII, XIV, XV, XVII, XVIII and CMBD in close cooperation; furthermore, there should be a close liaison with the Study Groups of CCIR dealing with digital transmission aspects. As in the previous study period it is proposed that Study Group XVIII would be responsible for coordination of the studies of a number of Study Groups concerned with integrated services digital networks.

To avoid overlapping of studies and possibly conflicting results by the many Study Groups which will study various aspects of the ISDN, Committee A approved detailed division of responsibilities of Study Groups concerned as contained in Annex E.

The Committee proposes that the content of Annex E be annexed to the Contribution No. 1 of each Study Group concerned with study of ISDN.

3 Evolution of Study Group structures

The Committee presents for the approval of the Plenary Assembly draft Opinion.

4 Work on terminology

It is proposed to approve the new text of Recommendation A.10 as contained on page 18 of Document AP VII-No. 96 with the supplement contained in Annex D.

The Committee proposes no amendments to the already approved revised text of Recommendation A.20 as contained in Document AP VII-No. 6.

The Committee further considers that the version of Recommendation A.21, as presented by the Study Group VIII to the Plenary and already approved by the Plenary Meeting, is satisfactory.

¹⁾ The term "Telematic services" is used provisionally.

5 Coordination with organizations outside ITU

The Committee considers it appropriate to recommend the Plenary to urge Administrations to carry out a thorough examination of the issues related to this topic during the coming study period with a view to proposing any necessary changes to the VIIIth Plenary Assembly.

6 Revision of Resolution No. 1

The Committee proposes to the Plenary Assembly to adopt the amended text of Resolution No. 1 as contained in Temporary Document No. 28/COM A.

In the text of Resolution No. 1, the term "Working Party" is widely used. To avoid misunderstanding it is proposed when this term first appears in the text of the Resolution to add a footnote indicating that this term does not apply to the Working Parties created by the Study Groups in the process of organizing their work.

7 Amendment of Resolution No. 2

The Committee proposes to add at the end of the existing text of the Resolution the following sentence: "In all cases communication should be made in the most effective manner."

8 Amendments of Opinion No. 3

The Committee proposes in the Annex to change the text "Administration of origin" with "Source" and delete footnote 1.

PART II
Annexes to the Committee's report**ANNEX A****Minutes of the Committee's meetings**

Chairman: Mr. A. R. BASTIKAR (Canada)

FIRST MEETING

Tuesday, 11 November 1980, at 14.40 hrs

- 1 Opening remarks by the Chairman
- 2 Organization of the Committee's work
 - 2.1 Review of work
 - 2.2 Establishment of working parties and their mandate
 - 2.3 Allocation of AP documents
- 3 Amendments to Resolution No. 2 (Accelerated procedure for the provisional approval of Recommendations)
- 4 CCITT documentation
- 5 Coordination of work in the CCITT

1 Opening remarks by the Chairman

1.1 The *Chairman* emphasized the importance of the current Plenary Assembly for the CCITT, which was at a critical point in its history and would need to move forward with increased efficiency while maintaining the traditionally high standards of the ITU. Committee A had the particularly responsible task of setting the tone for the future as far as structure and organization of work were concerned and of preparing guidelines which could be followed by Committee B when it considered the Study Groups' future work programme.

2 Organization of the Committee's work

2.1 Review of work

2.1.1 The *Chairman* observed that the Committee had before it an unusually large number of proposals from both Administrations and the Director of the CCITT. For instance, there were at least 12 major proposals in connection with Resolution No. 1, 30 or more proposals concerning the restructuring of Study Groups, at least five major proposals on coordination with the CCIR and other international organizations, as well as a number of proposed amendments to existing Resolutions and Opinions and some draft new Resolutions.

2.2 Establishment of working parties and their mandate

2.2.1 At the suggestion of the *Chairman*, it was *decided* to set up two working parties (Working Parties COM A/1 and 2) to be chaired, respectively, by Mr. Simpson (United Kingdom) and Mr. Irmer (Federal Republic of Germany), Vice-Chairmen of the Committee. It was further *agreed* that Working Party COM A/1 would consider questions relating to Study Group structure, while Working Party COM A/2 would deal with working methods, including amendments to Resolution No. 1 and Opinion No. 3.

2.2.2 The *Secretary* announced that Mr. Pierre and Mr. Bigi, CCITT Engineers, would act as Secretaries of Working Parties COM A/1 and 2 respectively.

2.3 Allocation of AP documents (Temporary Document No. 4/COM A)

2.3.1 The *Chairman* said that Document AP VII-No. 126 and Temporary Document No. 31/PLEN. should be added to the list of documents relating to the work of Committee A in Temporary Document No. 4/COM A. Naturally, all the Temporary Documents in the COM A series were also relevant. He appealed to the Working Parties to confine their discussions to only those aspects of the documents before them that concerned the Committee's work.

2.3.2 At the suggestion of the *delegate of Denmark*, it was *agreed* to refer Temporary Document No. 31/PLEN. to Working Party COM A/2.

3 Amendments to Resolution No. 2 (Accelerated procedure for the provisional approval of Recommendations) (Document AP VII-No. 32)

3.1 The *Director of the CCITT* introduced his proposed amendments to Resolution No. 2 (Document AP VII-No. 32), which were designed to reduce both the time and the expense involved at the present time in securing the provisional approval of draft Recommendations.

3.2 The *delegate of the Republic of Korea* supported the proposed amendments, since they would serve to enhance the efficiency of the CCITT.

3.3 The *delegates of the United States, Canada, Brazil, the U.S.S.R. and Argentina* said that they would have difficulty in accepting the amendments, which called in question the concept of unanimity and would enable draft Recommendations to be adopted for provisional implementation by a very small number of Administrations in instances where participation in the Study Group meetings concerned had been low.

3.4 The *delegate of the German Democratic Republic* read out a series of sub-amendments to the proposals in Document AP VII-No. 32 which his delegation wished to suggest with a view to reconciling the various legitimate concerns expressed.

3.5 The *delegate of France*, supported by the *delegates of Tunisia and the United States*, considered that the first question to be settled was whether or not the Resolution should be amended at all.

3.6 The *Director of the CCITT* expressed the hope that, failing all else, delegations would be able to agree that the draft Recommendations submitted for consultation should be published in an Information Circular or Operational Bulletin in order to save the expense of consulting each Administration individually by letter. Administrations might perhaps be requested to reply by telex in order to save time, after which they would be informed by the CCITT of the outcome of the consultation and, as appropriate, the date set for provisional implementation of the Recommendation concerned.

3.7 Following further discussion, in which the *delegates of Lebanon, the United Kingdom, Spain, Brazil, Switzerland, the United States and Senegal* took part, the *Chairman* said there appeared to be general agreement, first, that the text of Resolution No. 2 should remain as it stood and, second, that the three-month time limit to which reference was made in

paragraph 2 should be retained. The only question which had yet to be settled concerned the means of communication to be used between the CCITT and Administrations. He suggested that Working Party COM A/2 should be requested to study the matter and submit a proposal to the Committee.

It was so agreed.

4 CCITT Documentation (Documents AP VII-Nos. 41, 82 and 110; Temporary Documents Nos. 1/COM A and 6/COM A)

4.1 *Document AP VII-No. 82* (Documents for CCI meetings – Control of volume and observance of time limits for arrival at Headquarters)

4.1.1 The *Chairman of the Committee B* referring to the third substantive paragraph of Resolution No. 847, requested clarification on the manner in which it was intended to establish the matters which were of priority interest.

4.1.2 The *delegate of Denmark* drew attention to Temporary Document No. 31/PLEN. submitted by the Nordic countries, which suggested that the Study Groups should establish an action plan in which Study Questions would be grouped in three categories – high, medium and low priority, with a view to reducing the workload and the volume of documents confronting the Study Groups.

4.1.3 The *delegate of France* drew attention to the request in Resolution No. 847 for relevant data on the cost of processing documentation and asked whether further information on the subject would be forthcoming.

4.1.4 The *Secretary-General* said that Temporary Documents Nos. 18 and 28 contained information and statistics on the volume and cost of publications and other documentation. He would, however, be happy to provide any further information, on request.

4.1.5 The *delegate of the United Kingdom*, supported by the *delegate of France*, said that it would be useful to have details on the volume and cost of documents emanating from Administrations, RPOAs and organizations participating in the work of the CCIs, on the one hand, and from Plenary Assemblies of the CCIs, on the other, so as to determine exactly where expenses were being incurred and where a closer look at the documentation would be useful.

4.1.6 The *Chairman* said that the Secretary-General would provide information on the subject as soon as possible in a temporary document. He proposed that Working Party COM A/2 be asked to take Resolution No. 847 into account in making its recommendations.

It was so agreed.

Document No. AP VII-No. 82 was noted.

4.2 *Document AP VII-No. 41* (Report on the organization of the CCITT Study Groups)

4.2.1 The *delegate of Spain* said that Document No. 41 merely recalled that the ultimate objective was to reduce the volume of documentation to essentials and that the situation called for strict compliance with the general directives given in the "Additional Rules of Procedure of the CCITT".

Document AP VII-No. 41 was noted.

4.3 *Document AP VII-No. 110* (Some comments on the organization of the CCITT)

4.3.1 The *delegate of Belgium* presented the document submitted by his delegation, which suggested that the two main categories of CCITT documents should be treated differently, the study documents being circulated to a restricted number of participants and the reports given a wider distribution.

4.3.2 The *delegate of Spain*, supported by the *delegate of Canada*, said that some other way of cutting down the volume of documentation should be sought since any restriction on distribution would mean that countries not participating in the Study Groups might not receive certain information in which they were interested.

4.3.3 The *delegate of Belgium* suggested that Administrations might be asked to make known at the start of each study period whether they intended to participate actively or passively in the various Study Groups. Distribution of documentation could then be planned accordingly.

4.3.4 The *delegate of France* observed that Temporary Document No. 1/COM A contained more precise suggestions with regard to the volume of documentation.

4.3.5 The *delegate of Senegal*, supported by the *delegate of the United States*, suggested that all matters relating to the volume of documentation be referred to Working Party COM A/2, which could examine the issue in greater detail and take into account all the views which had been expressed on the subject.

It was so agreed.

Document AP VII-No. 110 was noted.

4.4 *Temporary Document No. 1/COM A* (Documents for CCI meetings)

4.4.1 The *delegate of Canada* said that his delegation supported the very specific and practical suggestions contained in Temporary Document No. 1/COM A. He asked for clarification of the reference to a Council document of 1977 in which scientific or industrial organizations were restricted to the receipt of three copies only.

4.4.2 The *Director of the CCITT* said that, although the restriction was not generally respected, he had thought it useful to bring the point to the attention of the Committee.

Temporary Document No. 1/COM A was *noted*.

4.5 *Temporary Document No. 6/COM A* (Distribution of documents and reports)

4.5.1 The *representative of INTELSAT* said that the proposed amendment to Section III, §3, d) of Resolution No. 1 omitted any mention of international organizations authorized to work with the CCITT.

4.5.2 The *delegate of Sweden* said that that omission was involuntary, as the amendment was intended to cover all possible participants. Although the proposal of the Nordic countries might increase the amount of paper work, it would contribute to increased efficiency.

4.5.3 The *delegate of the United States* supported the proposal of the Nordic countries.

4.5.4 The *delegate of Italy* wondered whether the proposal that one language should take precedence over another in respect of document distribution was in conformity with ITU Rules.

4.5.5 The *Deputy Secretary-General* said that if the proposal were adopted, the cost of CCITT activities would be increased considerably. He suggested that the matter be left open so that the General Secretariat could comment on it in the appropriate Working Party.

4.5.6 The *Chairman* suggested that the matter be taken up by Working Party COM A/2.

It was so *agreed*.

Temporary Document No. 6/COM A was *noted*.

5 Coordination of work in the CCITT (Document AP VII-No. 33)

5.1 The *Secretary* drew the Committee's attention to the Resolution on Joint Working Parties in Temporary Document No. 2/COM A and suggested that the Committee might wish to adopt that Resolution for submission to the Plenary Assembly.

5.2 The *delegate of Canada* said that his delegation had not yet had time to study the document and would prefer discussion on the subject to be postponed to a subsequent Committee meeting.

It was so *agreed*.

The meeting rose at 18.00 hours.

SECOND MEETING

Friday, 14 November 1980, at 09.35 hrs

- 1 Approval of the Minutes of the first meeting of Committee A
- 2 Review of the work of Working Party 1
- 3 Review of the work of Working Party 2
- 4 Coordination of work in the CCITT with other organs and international organizations

1 Approval of the Minutes of the first meeting of Committee A (Temporary Document No. 16/COM A)

1.1 The *delegates of the United Kingdom, France and Australia* proposed that approval of the Minutes be deferred until the next meeting, since delegates had not had time to consider the document thoroughly.

It was so *decided*.

2 Review of the work of Working Party 1

2.1 The *Chairman of Working Party 1* said that his group had discussed the question whether a joint working party should be set up with CCIR Study Group II on matters relating to Teletext and had decided to follow the proposal of the Chairman of Study Group VIII that liaison with the CCIR should be effected by individuals, rather than through a joint body. With regard to Study Group structure, it had been decided not to merge Study Groups V and VI but to arrange for

their meetings to be held close in time. No conclusion had yet been reached on proposals to merge Study Groups concerned with telegraph matters. A temporary document on problems relating to the ISDN, closely connected with the terms of reference of Study Group XVIII, would be discussed shortly, and a few minor matters depending on decisions reached on the items he had outlined were still outstanding. Working Party 1 might be able to complete its work during the morning, but in any case should finish before noon on Saturday, 15 November.

The Committee *took note* of that oral report.

3 Review of the work of Working Party 2

3.1 The *Chairman of Working Party 2* said that his group had generally accepted the proposals in Documents AP VII-Nos. 84 and 85 and Temporary Documents Nos. 31/PLEN. and took note of 34/PLEN. Most of the proposals in Document AP VII-No. 31 had been approved, with minor changes, but it had been decided to maintain the existing time-limit of three months for the submission of contributions. With regard to the two major issues raised in Document AP VII-No. 33, the Working Party had agreed that the latitude given to the Director of the CCITT in Resolution No. 1 was sufficient to make it unnecessary to insert specific references to preparatory groups and that there was no need to go into a great deal of detail concerning the urgency of individual Questions as this had been already discussed when considering Temporary Document No. 31/PLEN. Temporary Document No. 5/PLEN. containing amendments to Resolution No. 1 had been generally accepted. Some proposals on improved methods of processing contributions were still outstanding and the Working Party had not yet considered amendments to Resolution No. 2 and Opinion No. 3; accordingly, it was highly doubtful whether the work could be completed during the next meeting of Working Party 2.

3.2 The *delegate of Canada* asked for some clarification of the statement that the Director already had the necessary latitude to convene Committees A and B before the Plenary Assembly.

3.3 The *Chairman of Working Party 2* observed that the proposal in question did not entail convening Committees A and B, but preparatory groups on organization and working methods, whose composition would be possibly restricted. The consensus in the Working Party had been that such groups could be useful and that the Director was entitled to convene them under paragraph II.3 of Resolution No. 1.

3.4 The *delegate of Canada* said that, even if the Director was entitled to convene preparatory groups – in effect comprising Committees A and B – it would be advisable to specify that such groups would indeed be convened, since otherwise the next Plenary Assembly might be confronted with the same situation of unpreparedness as the current one.

3.5 The *Director of the CCITT* pointed out that it was impracticable to convene Committees A and B prior to the Assembly, for financial as well as other reasons. On the other hand, paragraph II.3 of Resolution No. 1 empowered him to convene, for example, a group consisting of Study Group Chairmen and members of the Administrative Council which would certainly be a forum competent to make proposals to the Assembly.

3.6 The *Chairman of Working Party 2* drew attention to the new paragraph II.5 of Resolution No. 1, inserted at the proposal of Temporary Document No. 5/PLEN. (Italy), under which the Director was to prepare a consolidated report containing the proposals received. That was another measure likely to improve preparations for the Plenary Assembly.

The Committee *took note* of the oral report on the work of Working Party 2.

4 Coordination of work in the CCITT with other organs and international organizations (Documents AP VII-Nos. 96, 126; Temporary Documents Nos. 24/PLEN., 40/PLEN., 2/COM A, 3/COM A)

4.1 The *Chairman* suggested that, since Working Party 1 seemed to be fairly advanced with its work, the item could be referred to it for consideration.

It was so *agreed*.

The meeting rose at 10.05 hours.

THIRD MEETING

Monday, 17 November 1980, at 14.35 hrs.

- 1 Approval of the Minutes of the first meeting of Committee A
- 2 Approval of the Minutes of the second meeting of Committee A
- 3 Approval of the Report of Working Party 2
- 4 Approval of the Report of Working Party 1
- 5 Completion of the work of Committee A

1 Approval of the Minutes of the first meeting of Committee A (Temporary Document No. 16/COM A)

Approved, subject to the replacement of the words “The *delegate of France*” by “The *Chairman of Committee B*” in paragraph 4.1.1.

2 Approval of the Minutes of the second meeting of Committee A (Temporary Document No. 21/COM A)

Approved.

3 Approval of the Report of Working Party 2 (Temporary Document No. 28/COM A)

3.1 The *Chairman of Working Party 2* introduced the Report, drawing special attention to the major amendments to draft Resolution No. 1 and to the statement in § 2.8 that the Resolution in its amended form could be an effective and powerful tool for improving organization of the working methods of the CCITT, but to that end it was indispensable for all the parties concerned to observe the provisions of the Resolution.

3.2 The *Chairman* observed that the Secretariat might find it difficult to produce the consolidated Report called for in the new section II.5 of Resolution No. 1 sufficiently in advance of the Plenary Assembly, since a number of current Assembly documents had been received by delegations only on their arrival in Geneva.

3.3 The *delegate of the United Kingdom* pointed out in connection with section I.3 that Plenary Assemblies in fact only set up Joint Working Parties and suggested that the word “Joint” be inserted before “Working Parties” in the fourth and fifth lines of the section.

3.4 After some discussion, during which it was pointed out that the Plenary Assembly was free to set up permanent Working Parties which were not necessarily joint groups but that it could not establish the Working Parties of Study Groups, the *delegate of the United States of America*, supported by the *delegate of the United Kingdom*, proposed that the text should remain unchanged, but that a footnote should be added to the first mention of Working Parties, to the effect that the Working Parties of Study Groups were not concerned.

It was so *decided*.

3.5 The *Chairman* reminded the Committee of a suggestion by the Director of the CCITT that members of the Administrative Council might be invited to take part in preparatory Working Parties.

3.6 The *delegate of Japan*, supported by the *delegate of the Federal Republic of Germany*, proposed that the words in parentheses in section III.9.d) be deleted, to avoid giving the impression that the accelerated approval procedure applied to provisional Recommendations, not to urgent cases.

It was so *decided*.

3.7 The *Director of the CCIR*, referring to section III.8.h), said that the limitation of participation in CCITT meetings was at variance with the CCIR's interpretation of Nos. 377 and 379 of the Convention, which seemed to entitle international organizations and industrial or scientific organizations to participate in all the work of CCI Study Groups.

3.8 The *Director of the CCITT* said that if the provision was to be maintained the organizations in question should be informed of any restrictions well in advance of meetings, so that they should not send representatives to Geneva only to find that they would not be admitted.

3.9 The *Chairman of Working Party 2* pointed out that the new section III.8.h) was less restrictive than the corresponding provision adopted at the VIth Plenary Assembly, since it contained the words “wholly or in part”.

After a brief discussion, it was *decided* to retain the provision, with the addition of an appropriate note taking into account the comments of the Directors of the CCIR and the CCITT.

3.10 The *delegate of Italy*, referring to section III.3.d), said that it was essential for the contributors in question to be supplied with a list of the addresses and other particulars of Chairmen, Vice-Chairmen and Special Rapporteurs. He proposed that a clause along the lines of the second paragraph of section II.6 be added to section III.3.d).

3.11 The *Chairman of Working Party 2* observed that such lists were issued at the beginning of each study period and that it was for the Chairman of each Study Group to make the necessary arrangements. Resolution No. 1 already contained adequate provisions in sections II.6 and III.9.g).

It was *decided* to keep the provision unchanged, taking note of the remarks of the delegate of Italy.

Draft Resolution No. 1, as amended, was *approved*.

3.12 The *Chairman of Working Party 2* introduced draft Resolution No. 2 and draft Opinion No. 3, which had been slightly amended.

Draft Resolution No. 2 and draft Opinion No. 3 were *approved*.

3.13 The *Chairman of Working Party 2* thanked all the participants in the Working Party for their contributions to an improved version of Resolution No. 1.

3.14 The *Chairman* expressed the gratitude and appreciation of Committee A for the effective work accomplished by Working Party 2.

4 Approval of the Report of Working Party 1 (Temporary Documents Nos. 17/COM A, 19/COM A (Rev. 1), 22/COM A (Rev. 1), 23/COM A, 26/COM A, 27/COM A, 29/COM A, 30/COM A)

4.1 The *Chairman of Working Party 1* introduced the Report, contained in Temporary Documents Nos. 17/COM A, 23/COM A, 27/COM A and 29/COM A, pointing out that the words "and digital multiplexing equipment" should be deleted from the first paragraph of section 4 of Temporary Document No. 27/COM A. He read out a number of amendments to Temporary Document No. 29/COM A and said that the supplement referred to in the last paragraph of section 6 would appear as Temporary Document No. 30/COM A, not yet issued, and would have to be considered by the Plenary Meeting in conjunction with the Report of Committee A.

4.2 The *delegate of the Federal Republic of Germany* observed that the term "telematic", used in the tables of Study Group I and of merged Study Groups VIII and XIV in Temporary Document No. 22/COM A, had not yet been defined. Such a definition was very important from the legal point of view, since some Administrations dealt with both telecommunications and informatics and others did not.

4.3 The *Chairman* and the *Chairman of Working Party 1* considered that the generic term "telematic" was generally enough understood to be used in the titles concerned, on the understanding that the CMV would concern itself with a definition during the forthcoming study period.

4.4 The *delegate of the United States of America* proposed that the title of merged Study Groups VIII and XIV be changed to "Terminal equipment for telematic services" and that a footnote be added to indicate that the term "telematic" had not yet been defined.

4.5 The *Chairman of Study Group I* observed that the term "teleinformatic" had been generally defined and had been adopted unanimously by Study Group I for non-voice services (Document AP VII-No. 93, § 3.2.5).

4.6 The *delegate of France* said that the word "teleinformatic" had not been defined more accurately than "telematic" and that his Administration used the last-named term. He supported the United States proposal, as did the *delegate of Canada*.

4.7 The *Chairman of Working Party 1* suggested that the footnote proposed by the United States should read: "Telematic is a provisional term to cover such services as Teletex, Videotex, etc.".

4.8 The *delegate of Greece*, referring to the title of Study Group I, said that the main point was to differentiate between traditional telegraph and other services.

4.9 The *Chairman of Study Group I* said he was reluctant to accept a title for his Study Group which contained an undefined term. Moreover, he was concerned by the postponement until the VIIIth Plenary Assembly of the entirely logical transfer of the service definition of all non-voice services from Working Party VII/3 to Study Group I, which intended to propose a new Question on the matter.

After a brief discussion, the United States proposal to amend the title of merged Study Groups VIII and XIV and the footnote proposed by the Chairman of Working Party 1 were *approved*.

4.10 The *delegate of the German Democratic Republic*, referring to section 9 of Temporary Document No. 29/COM A and speaking as a member of the informal Joint CCITT/UIC Working Party, said that the decision not to formalize that group should be communicated to the UIC by the Director of the CCITT.

It was so *agreed*.

4.11 The *Chairman of the Working Group on Vocabulary (CMV)* summarized Temporary Document No. 30/COM A, which would be discussed at a Plenary Meeting together with the Report of Committee A.

The Report of Working Party 1, as amended, was *approved*.

4.12 The *Chairman of Working Party 1* thanked all the members of the Working Party, especially the Chairmen of drafting Groups, for their valuable cooperation.

4.13 The *Chairman* expressed the gratitude of Committee A for the efficient work done by Working Party 1.

5 Completion of the work of Committee A

5.1 The *Chairman* said that, although Committee A unfortunately had no time to do justice to a number of interesting proposals, it had nevertheless been able to make good progress with the task of improving the working methods and structure of the CCITT. He thanked all those concerned for their assistance and announced that Committee A had completed its work.

The meeting rose at 16.35 hours.

ANNEX B

Report by Working Party 1

1 The documents relating to the terms of reference of WP I were introduced by their authors. These are documents AP VII-Nos. 33, 41, 71, 96, 107, 109 and 126 as well as Temporary documents 6/PLEN., 8/PLEN., 9/PLEN., 24/PLEN., 2/COM A and 10/COM A.

2 It was decided first to concentrate the discussions on some proposals for which an agreement seems to exist in many documents.

3 Many contributions recommended the merging of Study Groups V and VI. The main arguments were the following:

- The Study Groups have attracted a relatively small number of contributions, as can be verified from the statistics given in Doc. AP VII-No. 71.
- Many Administrations send the same members to both Study Groups.
- The subjects studied in both Study Groups are related to Protection.

These arguments were rejected by a number of intervening delegations. Agreement was finally reached on the following conclusions:

- Study Groups V and VI would not be merged.
- To help attendance, particularly by remote Administrations, the meetings of these Study Groups should be systematically held sequentially.

4 Merging of Study Groups IX and X

- a) A very large majority of delegations supported the view that the merging was highly desirable.
- b) The main arguments advanced in favour of the merging were the following:
 - With the maturing of the telegraph service, there is a reduction in the level and nature of studies and this provides an opportunity for consolidation of these two Study Groups, as the matters for study by these Groups are becoming closer and closer with the evolution of technology.
 - Progress of study would be accelerated by avoiding the "ping-pong" procedure of coordination.
 - The growing integration of switching and transmission.
- c) Partial measures such as drafting the agendas so that delegates could arrange to come exclusively to a discussion of subjects of their interest, holding sequential or joint meetings would only delay the solution of the problem.
- d) In view of the very large majority in favour of the merging, it was then decided, before taking a final decision, to invite the Chairmen of the concerned Study Groups to consult upon advantages and disadvantages of the merging and to communicate their views to the Working Party. The same invitation was also addressed to Chairmen of Study Groups VIII and XIV.
- e) The question of the identification of the Study Groups collaborating in the drafting of a common set of Recommendations was also raised.

5 Question of ISDN

To avoid overlapping of studies and possibly conflicting results by the many Study Groups which intend to study various aspects of the ISDN, detailed suggestions were read by the delegation of the United Kingdom.

As the suggestions are contained in a temporary document which is in process of publication, it was decided to resume the discussions as soon as the document would become available.

The United Kingdom will then be invited to amend the document, taking into account the preliminary discussions on its content, in particular to include possibility of collaboration with Study Group IV and CMBD.

The delegation of the United Kingdom indicated the amendments which are necessary to their document (TD 19/COM A) as results of the discussions made at the second session of Working Party 1. A majority of delegations supported the document as amended and pointed out that it had been drafted in the light of decisions taken last year in the *ad hoc* chairmen meeting. However, a number of delegates were of the opinion that the domains of cooperation with the other interested Study Groups were not clearly enough delimited.

The Chairman of Study Group XVIII drew the attention of the fact that the cooperation with CCIR and other CCITT Study Groups is already covered in the text of the question and that the document was concerned only with the local network access, an aspect which is of little interest to CCIR.

As a conclusion of the discussions, the Chairman of Working Party 1 decided to set up a small drafting group to amend TD 19/COM A.

The contacts between ISDN and the Study Groups interested in various aspects of the work will have to be established in an officially recognized basis.

- a) Temporary Document 19/COM A (Rev. 1) was adopted with the following amendments:
 - In the Note to item 4, amend the content of the brackets to read “(e.g. ISDN circuit...)”.
 - In item 7, iii), add “,XVII” to column “Assign to:”
- b) In Contribution No. 1 of each of the Study Groups concerned with study of ISDN, Temporary Document 19/COM A (Rev. 1) will be annexed to the corresponding Question.

6 Coordination between CCITT and CCIR

The matter of coordination of work between the two CCIs in the field of Teletext and data broadcasting systems was discussed (Temporary Document No. 3/COM A).

The Group came up with the conclusion that the method of coordination described in paragraph 11.7 of Document AP VII-No. 87 (mutual participation of specifically designated liaison members in CCITT and CCIR meetings) is a more effective method than the creation of a Joint CCITT/CCIR Working Party.

7 Merging of Study Groups IX and X

After consultation, the Chairmen of Study Groups IX and X came to the conclusion that the merging of the two Study Groups was a feasible proposal. The human and financial resources would not be very much affected by the merging (three Vice-Chairmen would be necessary), but an improvement in efficiency and attendance is expected. It would also be desirable to transfer to the new Study Group the part of Study Group VIII's work concerned with telex terminals.

It was also the opinion of Study Group VIII's Chairman that this transfer would relieve the load of work of Study Group VIII and further the progress of the studies because of the major interest of Study Group X in the question of telex terminals.

In view of the very large majority in favour of these proposals, Working Party 1 decided to recommend the merging of Study Groups IX and X and the transfer of the “telex terminals” aspect of Study Group VIII.

8 Merging of Study Groups VIII and XIV

Again the Chairmen of Study Groups VIII and XIV concluded from their consultation that the merging of these Study Groups was feasible and desirable. A very large majority supported this opinion, mainly for the same reasons as indicated in favour of the merging of Study Groups IX and X in the report of the second session of Working Party 1 (TD 23/COM A, § 1, b).

A proposed compromise to hold sequential meetings of the two Study Groups was rejected, as it would only help somewhat in protocol interworking, but would not solve the problem of “ping-pong” procedure neither would it favour the interworking between character orientated and graphic orientated services. The large number of joint meetings of the two Study Groups and the fact that the transfer of the work on telex terminals would relieve the burden of work on the new Study Group were additional arguments.

Therefore Chairman of Working Party 1 decided to recommend the merging to Committee A. Here again it was considered that three Vice-Chairmen would be necessary.

9 Transfer of work from Study Group XVIII to Study Group XV

It was decided to recommend the transfer to Study Group XV of the aspects of the work of Study Group XVIII related to transmission systems, including cable transmission systems.

This will leave more freedom to Study Group XVIII to concentrate on the urgent studies on ISDN.

The Chairman of Study Group XVIII pointed out that the Questions which are decided to be transferred to Study Group XV are those which are clearly identified in Document AP VII-No. 104, page 2, as Questions M/XVIII, N/XVIII, S/XVIII, T/XVIII, U/XVIII and V/XVIII.

10 Transfer of work to Study Group I

It was proposed to transfer to Study Group I some aspects of the work of Working Party VII.3 bringing together the service definition (including facilities) and operations aspects of all non-voice services. Although Working Party I unanimously agreed that such a transfer is desirable in the future, this step was considered to be premature at this stage. The way in which Study Group I will be looking at the problem of harmonization of the services defined in Working Party VII.3 and by ISDN during the next study period (refer to their new Question) seems to be reasonable.

In view of the clear majority in favour of the status quo, it was decided to recommend to Committee A to maintain it.

11 Structure of Study Groups – revised titles

- a) Temporary Document 22/COM A was adopted with amendments which will appear in a revised version of the document.
- b) The proposed terms of reference for Study Group I in Document AP VII-No. 94, § 3.2, were not accepted.
- c) For the title of Study Group XVIII, the Spanish delegation decided to adopt “red digitales” in place of “redes numéricas”.

12 Future structure of Study Groups

A number of documents and interventions during the meetings of Working Party 1 were related to the possible evolution of Study Group structures in the future. It was decided to set up a little drafting group which drafted Temporary Document No. 20/COM A.

In the discussion of Temporary Document 20/COM A, it was proposed to delete § 2.2 and § 2.1 to be redrafted. Furthermore, alternative 3.2 is recommended. The document will be amended and presented by Mr. Gosztony to Committee A in the form of a draft “Opinion”.

13 CMV – terminology

Examination of Document AP VII-No. 96 gave rise to a general discussion. Some Study Group Chairmen communicated that they had experienced difficulties in the coordination of terminology work with Joint CCIR/CCITT Group CMV, whereas others were satisfied with the collaboration.

It was also pointed out that a clear distinction should be drawn between the terms defined by the CCITT Study Groups for the purpose of their own studies and internal utilization and the more general terms of interest to the whole electrotechnical engineering. The first series of terms are mostly collected in CCITT Recommendations.

The Chairman of CMV indicated that in a preamble to the publication of the International Electrotechnical Vocabulary, due attention will be drawn to this fact, with the indication that only the definitions contained in CCITT Recommendations should be considered to have an official approval of CCITT.

As a conclusion, it was felt that some supplement might be necessary to the proposed Recommendation A.10, page 18 of Document AP VII-No. 96. A little Working Group will take charge of the review of Recommendation A.10 with the purpose to present their comments to the next session of Committee A.

14 Joint Working Parties

Temporary Document 2/COM A was considered. Working Party 1 unanimously could not feel any need for a new explicit Resolution as authority to organize joint meetings of both CCI's Study Groups is already granted to the Directors of CCITT and CCIR in No. 423 of the International Telecommunications Convention.

15 CMBD

The Netherlands Administration withdrew Temporary Document 9/PLEN., as the aspect of it related to ISDN was already taken into account in Temporary Document 19/COM A (Rev. 1). It is understood that the request for CMBD to report officially to the Plenary Assemblies of both CCIs is justified and accepted.

16 Need for a Joint CCITT/UIC Working Party

The request for creation of this Joint Working Party is contained in Document AP VII-No. 118, § 11.2.2, page 39.

Working Party 1 expressed to Study Group V recognition for the need of continuing cooperation with UIC in the same form as this has been carried out up to now. It was not felt necessary to create a formal Joint Working party.

17 Coordination with organization outside ITU

a) A thorough review of this matter was felt necessary, as is also expressed in Section 3 of Document AP VII-No. 33. Because of the importance of the matter, it is recommended that it should be thoroughly examined during the next study period with a view to proposing necessary changes to the VIIIth Plenary Assembly.

Administrations are requested to undertake such study.

An ISO representative stressed the importance of augmenting the very effective day-to-day liaison between the CCITT and the ISO by additional informal discussions as the occasions may demand.

b) Temporary Document 17/PLEN. was also examined, with the following conclusions:

- The editorial amendments to Recommendation A.20 are approved.
- The version of Recommendation A.21 as presented by Study Group VIII and already approved in Plenary Meeting was considered satisfactory.

ANNEX C

Report by Working Party 2 of Committee A

1 General

The working Party COM A/2 established by Committee A of the VIIth Plenary Assembly met on 12, 13, 14 and 15 November 1980 under the chairmanship of Mr. T. Irmer (Federal Republic of Germany), Vice-Chairman of Committee A.

Working Party COM A/2 received a mandate from Committee A to deal with working methods, including amendments to Resolution No. 1 and Opinion No. 3. The following documents have been examined:

- Contributions AP VII-Nos. 31 and 32 (Director of the CCITT), 33 (Canada), 84 and 85 (United Kingdom), 110 and 111 (Belgium).
- Temporary Documents of the Plenary: 5/PLEN. (Italy), 31/PLEN. (Denmark, Finland, Iceland, Norway and Sweden), 34/PLEN. (International Telecommunications Users Group).
- Temporary Documents of Committee A: 1/COM A (Director of the CCITT), 6/COM A (Denmark, Finland, Iceland, Norway and Sweden), 7/COM A (Federal Republic of Germany), 9/COM A (Tanzania), 11/COM A (German Democratic Republic), 15/COM A (United Kingdom).

2 Examination of Resolution No. 1

2.1 Working Party COM A/2 considered the various proposals concerning improvements in preparatory work for the Plenary Assembly (as contained in Documents AP VII-Nos. 31, 33, 111 and TD 9/COM A, TD 5/PLEN.).

After discussion some of the proposals were incorporated in the revised text of Resolution No. 1.

At the same time, opinion was expressed that existing provisions of Resolution No. 1 are flexible enough and permit the Director to take various actions which he deemed necessary according to circumstances for adequate preparation of the Plenary Assembly. It was agreed that to specify exact actions to be taken during preparatory work would mean unnecessary restrictions to the freedom of action which should be taken by the Director if he feels that a need arises or requests for such actions are transmitted to him.

2.2 Working Party COM A/2 took note of the proposal made in document AP VII-No. 85 namely that at the Plenary Assembly, the Organization Committee should be charged to deal with Study Group structure as a priority matter and to submit its proposals on this matter to the Plenary Assembly in advance of its final report and by a defined date, say not later than the first week-end. The Director of the CCITT should consider this proposal in preparing the VIIIth Plenary Assembly.

2.3 Working Party COM A/2 in discussing TD 31/PLEN. and AP VII-No. 33 recommended to continue the present practice of wording with an asterisk (*) the questions considered urgent. A question is considered urgent if special steps have to be taken to enable its study to be completed before the next Plenary Assembly.

2.4 The meeting decided to recommend the continuation of the present practice of calling a two-day meeting of the Chairmen and Vice-Chairmen of the Study Groups immediately after the Plenary Assembly, as proposed in Contribution AP VII-No. 111.

The Director of the CCITT could take full profit of clauses II.3 and II.5 of Resolution No. 1 to prepare the work of the Plenary Assembly and to ensure the necessary coordination of work between the various Study Groups. The present practice of organizing, when necessary, a meeting of the Chairmen of Study Group and some members of the Administrative Council, was endorsed and considered sufficient as a preparatory measure instead of permanent groups as proposed in Contribution AP VII-No. 33 and TD 9.

2.5 The meeting took note of document TD 34/PLEN. It was felt that existing clause III.8.h) responds to the request of INTUG and therefore it was not felt necessary to modify Resolution No. 1.

2.6 A great discussion took place on the possible means of possibly reducing the cost involved with the processing of documents without lowering the efficiency required for performing the work of the Study Groups.

A first approach, given in Document AP VII-No. 110, TD Nos. 6 and 11, consists in proposing new rules such as prior distribution of documents in the original language, restrict distribution of documents, etc. The meeting considered those proposals with great attention as possible means of having the information reproduced in the quickest way and of improving the efficiency of work in the Study Groups. It was however felt that the implementation of these proposals could give rise to some constitutional (cf. Article 16 of the Convention) and financial problems (extra costs involved). The working Party felt that these proposals for the above reasons were not within its mandate. It is therefore recommended that more detailed investigations on the possible implementation of these proposals be requested from the General Secretary prior to the next Plenipotentiary Conference.

In agreement with these conclusions, the second approach, given in TD Nos. 7 and 15, was finally endorsed. In these documents in fact proposal is made to solve the problems of cost and efficiency by making more stringent the present rules of Resolution No. 1. The text of Resolution No. 1 reproduced in the Annex gives the text modified to this extent.

The meeting endorsed the present practice of the CCITT of reproducing the reports of the meetings with high priority and took note of the request of sending some documents to a limited number of Rapporteurs in their original language.

2.7 The meeting examined the proposals made by the Director in TD No. 1, part B, items 1 to 3 (the remaining items were already covered when amending Resolution No. 1).

2.7.1 The meeting endorsed the proposal in item 1, namely that:

“In the next study period, Administrations and recognized private operating agencies should be requested to keep the number of copies to be addressed to them to the absolute minimum, e.g. no more than five copies per contribution.”

2.7.2 The second proposal, namely that:

“Documents will be sent to a single postal address. In those cases where it remains necessary to keep certain individual addresses, the copies concerned will be included in the single despatch and will be distributed to the addresses by the Administration of destination.”

was generally accepted. However several doubts have been raised whether single addresses could be generally accepted for distribution. It is therefore requested that the CCITT Secretariat implement this proposal with sufficient flexibility.

2.7.3 As for the third proposal, namely that:

“Documents intended for scientific or industrial organizations should be restricted to three copies (see paragraph 5.6 (c) of Document 5095, CA 32, of 8 June 1977). Their contributions towards defraying CCITT expenses should cover the despatch of documents and their participation in meetings. For one half-unit, participation is confined to two Study Groups; for one unit, participation extends from three to five Study Groups, while for a two-unit contribution it includes six or more Study Groups.”

the meeting felt that the adoption of such procedure will introduce inequality in the treatment of participating organizations and therefore will give rise to constitutional problems which could not be treated within the competence of the Working Party.

2.8 Summarizing the discussion of all documents referring to Resolution No. 1, the Chairman stressed the point that Resolution No. 1, in its amended form, can be an effective and powerful tool for improved organization of the working methods of the CCITT. He pointed out that to this end it is indispensable that all parties concerned (i.e.: the Director, the CCITT Secretariat, Administrations and the Study Groups) are following the provisions of Resolution No. 1.

3 Examination of Resolution No. 2

According to the mandate given by Committee A, the Working Party examined the proposal of amendments to Resolution No. 2 given in Contribution AP VII-No. 32 (Director of the CCITT).

The Working Party reached the same conclusions of Committee A, i.e. not to depart from the existing provisions in Resolution No. 2, but to amend Part 2 of this Resolution, by adding at the end the following sentence: “In all cases communication should be made in the most effective manner.”

4 Examination of Opinion No. 3

Most of the proposals contained in Annex B to Document AP VII-No. 33 (Canada) were already considered when discussing Resolution No. 1.

The meeting felt that it was not necessary to amend Opinion No. 3 with the following two exceptions:

- item 5 reads “CCITT” instead of “CCCITT”
- in the Annex change the text “Administration of origin” with “Source” and delete footnote 1.

5 Conclusion of the meeting

At the last session, Mr. Hawkins (United Kingdom) on behalf of all delegates, thanked Mr. Irmer for the competence and courtesy with which he has conducted the debates. On his guidance it was possible to reach substantial improvement of the present CCITT working methods. On this occasion Mr. Hawkins made the proposal that for further improvement, the existing Resolution No. 1 may be divided in three separate Resolutions at a later stage.

ANNEX D

Report by Working Party on terminology

Introduction

The Working Group discussed revised Recommendation A.10 and, in particular, the operational aspects of the Work of the CCITT in the area of terminology. It was noted that Recommendation A.10 had already been approved by the Plenary Assembly with the acceptance of the report from CMV but it was felt that some minor amendments to the text of the Recommendation would assist in clarifying its intent.

Terminology Work in CCITT

The meeting perceived some serious difficulties in applying the provisions of revised Recommendation A.10 as they relate to the coordination with IEC. In the view of the meeting CCITT Study Groups develop terms and definitions to

ensure unambiguous interpretation of its Recommendations. CCITT further ensures coordination among its Study Groups and calls on CMV to help resolve coordination problems between the two CCI's. Recommendation A.10 however (in point 6) recommends that Administration use the telecommunication chapters of the IEV for general technological terminology. In practical terms this may imply that Administrations should be using terms that were neither reviewed nor approved by CCITT Study Groups. Another difficulty identified relates to the authority proposed for Special Rapporteurs in CCITT to approve CCI/IEC definitions on behalf of their Study Groups.

Conclusion and Recommendations

The Working Group concluded that the present wording of existing revised Recommendation A.10 may lead to serious operational problems and that the CCITT Study Groups will have difficulties in implementing it. It was noted that the Recommendation has not yet been approved by CCIR and that under the circumstances this Plenary Assembly could still consider appropriate amendments to satisfy the concerns expressed by the Working Group.

Consequently, the Working Group recommends the following:

- 1 That Recommendation A.12 be retained to provide the basis for collaboration with IEC which is referred to in the "considering" part of Recommendation A.10 revised. The footnote in A.10 should be amended accordingly.
- 2 That a footnote be added cross-referencing point 6 of Recommendation A.10 with the following words "This applies to terms and definitions approved by CCI Study Groups, which should be identified in the IEV".
- 3 That a footnote be added cross-referencing point A. 1.4 of Annex A to Recommendation A.10 reading: Before each decision concerning terminology work of the Study Group, the Special Rapporteur will consult his Study Group.

The Working Group finally expressed the regret that the actual text of Recommendation A.10 could not be amended at this time and decided to propose to this Plenary that the concerns of CCITT be communicated to CMV. It was also felt that an introductory note of explanation should be added to the section of the *Yellow Book* dealing with series A Recommendations reading as follows:

"Recommendations A.10, A.12 and A.14 deal with CCITTs activities in the field of terminology.

The work of CCITT in technical terminology is aimed at unambiguous understanding of the Recommendations and associated Regulations, etc.

The CMV performs a coordinating role on behalf of both CCIs and maintains liaison with the IEC/CCI Joint Coordination Groups".

ANNEX E

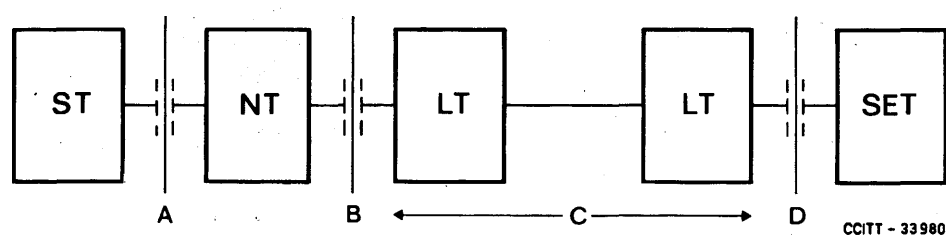
Study of ISDN

Examination of the Questions drafted by Study Groups III, IV, VII, XI, XVII and XVIII reveals that each Group intends to study various aspects of the ISDN. In order to avoid overlapping and possibly conflicting results it is proposed that the areas of responsibility for the study of ISDN should be assigned as follows:

*Assign to
Study Group*

- | | | |
|--|---|----------|
| 1 | Services and facilities interpretation and coordination (taking into account the requirements identified by Study Groups I, II, III and VII). | XVIII |
| 2 | General ISDN aspects and guidelines, quality of service, numbering, performance targets, maintenance principles and miscellaneous subjects not more specifically identified (taking into account the requirements of Study Groups I, II, IV, VII, XI, XVII and CMBD). | XVIII |
| <i>Note:</i> It is considered that Items 1 and 2 above are of high priority. | | |
| 3 | Digital transmission standards and performance (local and inter-exchange). The study of hypothetical reference connections is in the competence of Study Group XVIII, the study of hypothetical reference digital paths is in the competence of the specialized Study Groups of CCITT and CCIR, the study of reliability and availability is to be coordinated by CMBD. | XV/XVIII |
| <i>Note:</i> Also of interest to CCIR. | | |

- | | | |
|----|--|-------------|
| 4 | Switching aspects and parameters (taking into account the requirements identified by Study Groups VII, XVII and XVIII). | XI |
| | <i>Note:</i> In the case of mixed mode switches (e.g. ISDN circuit and packet) other Study Groups will also be consulted. | |
| 5 | Inter-exchange signalling system (MTP and appropriate User Part[s]) (taking into account the requirements identified by Study Groups VII and IX). | XI |
| 6 | Subscriber-exchange signalling system (taking into account the requirements identified by Study Groups I, II, VII and XVII and coordinated by XVIII – see Item 2). | XI |
| 7 | Subscriber-Network Interface | |
| | i) Interface B | XI |
| | ii) Interface A – Voice services | XI |
| | iii) Interface A – Non-voice services | VII/XVII |
| | iv) Interface A – Alternate voice/data | VII/XI/XVII |
| | <i>Note:</i> Close collaboration between Study Groups VII, XVII and XI will be required to ensure compatibility between 7 i), ii), iii), iv) and the subscriber signalling system identified in 6. | |
| 8 | Interworking (inter-service and inter-network) | |
| | i) Data | VII |
| | ii) Telex | IX |
| | iii) Telephone | XI |
| | iv) Data over the telephone network | I/II/XVII |
| | v) Teletex | I/VIII |
| | vi) Facsimile | I/VIII |
| | <i>Note:</i> Collaboration between the Study Groups referred to above will be required to ensure compatibility in the carriage of the various services on ISDN and other networks. | |
| 9 | Digital telephone instrument | XII |
| 10 | Tariff aspects | III |



Legend:

- | | |
|-----|--------------------------------------|
| ST | Subscriber Terminals |
| NT | Network Termination |
| LT | Line Terminal |
| SET | Subscriber line exchange termination |
| | Functional interfaces A, B, D |
| | Subscriber Line Transmission |

FIGURE 1
Possible functional interfaces¹⁾ in digital local access

¹⁾ "Interface" – "a concept involving specification of the interconnection..." page 89, *Orange Book*, "Definitions".

5.3 – REPORT BY COMMITTEE B TO THE PLENARY ASSEMBLY

(as approved by the eighth plenary meeting)

PROGRAMME OF WORK OF STUDY GROUPS

I. General

1 The Committee studied the allocation of Questions to Study Groups and to the two Joint Working Parties, LTG and SMM, maintained by the Plenary Assembly.

2 An asterisk has been used to indicate urgent Questions, i.e. those where studies should be concluded, or make significant progress, before the end of the next study period. It should be borne in mind that, in principle, the study of a Question should be completed within two study periods (No. 383 of the Convention).

3 The participation of a large number of Study Groups in the study of integrated services digital networks, which is coordinated by Study Group XVIII, has not always been specifically indicated in the form of Questions, but detailed information is given in Annex E to the Report of Committee A.

4 Study Groups studying new or existing services should keep Study Group III informed of their work.

5 The Committee noted that certain Study Groups have included a considerable number of contributions received from Administrations as Annexes to Questions. It was noted that the rules governing the annexing of texts to Questions varied considerably from one Study Group to another.

For the sake of uniformity, it was decided to adopt the following rules:

“Annexes to Questions should be approved by the relevant Study Group and should in principle only contain texts which throw light on the progress of work on the Question (extract from the report of a meeting of the Study Group concerned), are intended to form part of the Recommendations concerned or have been agreed upon in connection with the Recommendations (parts or summaries of draft Recommendations, etc.). Any other texts needed for the study of a Question which have not been approved and are not based on general agreement by the Study Group should be published as a contribution to the work of the Study Group under the responsibility of the author.”

6 The Committee recommends that, in preparing for the next Plenary Assembly, the Study Groups and the CCITT Secretariat should give consideration to the following points:

a) In order to avoid overlapping of work between Study Groups it is preferable, unless a Joint Working Party has been created, that no Question should be allocated to more than one Study Group. If it is necessary to do so, the tasks allocated to each Study Group should be clearly indicated.

b) The study programme proposed by each Study Group should be summarized in a table showing the titles of the Questions proposed, indicating in each case whether the Question is maintained, revised or new, together with any other Study Groups which may have to be associated in its study.

7 Subjects for study by the GAS should be included in Volume I of the *Yellow Book* after the Questions allocated to Study Groups and Joint Working Parties.

II. Questions to be Considered by the Study Groups

This Report contains only the amendments made to the title or text of the Questions proposed by Study Groups and reproduced in the documents to which reference is made for each Study Group. Each time the term “telematic” is used, the following note applies:

Note – The term “telematic” is provisional.

Study Group I (Relevant document: AP VII-No. 92)*Question 1/I*

Title to read: Service quality objectives for the services under study

Question 2/I

Add an annex with the text of Q.9/VII

Question 3/I

Add an annex with the text of Q.5/VII

Question 7/I

Replace "teleinformatic" by "telegraph and telematic"

Question 20/I (new)

Telewriting²⁾ service

Considering

- that there is a need for a service for the instantaneous transmission of man-made graphic information (e.g. hand-written text, drawings, etc.) drafted by subscribers connected to the telephone network;
- that such a system might be used for several applications, for instance:
 - between telephone subscribers via the speech channel, either simultaneously with the telephone conversation, or consecutive to the telephone conversation, or with both possibilities;
 - between a telephone subscriber and a computer and/or a data base, for instance for processing or storage of graphic information;
- that, if a decrease in transmission quality for the speech is involved, this decrease should be kept within acceptable limits.

1 What should be the basic characteristics and operational procedures of such a service?

2 What should be the mandatory and the optional features of the service?

3 What should be the quality parameters of such a service?

4 What will be the name of the service?

Note 1: It should be noted that some industrial organizations provide some equipment corresponding with registered trade marks.

Note 2: The Annex provides some elements of information concerning such a service.

Note 3: This Question should be studied in cooperation with:

- Study Group VIII (see Question 24/VIII);
- Study Group XVII, as far as transmission aspects are concerned (see Question 24/XVII);
- Study Group VII, if data communication network aspects are concerned (Question 26/VII).

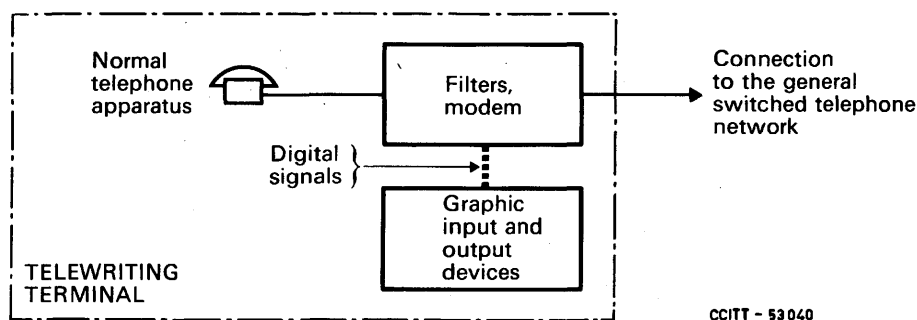
Annex
(to Question 20/I)

Additional information

In the Dutch experiments, the telewriting terminal consists of a normal telephone apparatus and some additional equipment enabling graphic communication. Speech and graphic communication can take place simultaneously. If the additional equipment is not used, the telephone terminal is connected directly with the GSTN.

²⁾ The term "telewriting" ("téléécriture" in French, "telescritura" in Spanish) is provisional and might be revised at a later date.

The figure shows a functional diagram of a scribophone.



Characteristics

- a) Graphic communication is possible with both national and international telephone calls.
- b) In the quiescent state and during connection establishment the telewriting terminal reacts as a normal telephone apparatus.
- c) The graphic communication utilizes half-duplex transmission.
- d) The graphic information to be transferred consists of straight and arbitrarily curved lines on a neutral background. This enables the exchange of handwritten texts and drawings.
- e) The input device is a "writing-tablet" on which the information is written with a special pen.
- f) The graphic information is converted into a 200 bit/s digital signal.
- g) By means of a modem the digital signal is converted into a signal in the range 1800-2000 Hz, suitable for insertion in the speech band.
- h) Filters are used at the sending and receiving ends in order to prevent mutual interference of graphic signal and speech signal.
- i) Output devices: display screen with memory, graphic printer, xy-recorder.
- j) Resolution, number of picture elements: 512×512 .

Options (realized or being considered)

- a) hard copy;
- b) automatic reception plus hard copy;
- c) use of discrete colours;
- d) use of full speech channel bandwidth and corresponding higher bit rate for the transmission of pre-recorded graphic information;
- e) correction of graphic information on a display screen.

Question 21/I (new)

Utilization of the standards and options in the Series S and T Recommendations in the telematic services.

Since the Series S and T Recommendations provide for standards and options for several applications, the utilization of such standards and options in the telematic services should be specified by:

- 1 precisely defining the terminology used (standardized complementary services, recognized options and non-standardized complementary services);
- 2 recommending conditions for the utilization of those standards and options in the services defined by Administrations.

Note 1: This Question should be studied in cooperation with Study Group VIII.

Note 2: Account should be taken of the relevant terms and definitions in the Series S Recommendations.

Annex
(to Question 21/I)

(Text of draft Recommendation T.35 – see Document AP VII-No. 79)

In view of the decision of the Plenary Assembly on the denomination of the new non-voice services, the titles and texts of Study Group I Questions will be reviewed.

Questions 2, 3, 9, 12 and 21 are considered to be urgent.

Study Group II (Relevant documents: AP VII-Nos. 63 and 30)

Question A/II

For the short title, delete the explanations in brackets.

Question J/II

1 Change the title of the Question to read:

“Development of the World Telephone Numbering Plan”.

2 Immediately after the first *considering*, add another *considering* reading:

– “that the study of numbering aspects relating to the ISDN may have an impact on existing numbering plans”;

(See also *considering* c) of the new wording of Question 4/VII.)

Question T/II

Add the following note:

Note: Close coordination in the studies on service quality (Question T/II) and network performance (Question A/IV) is required.

Question Y/II (new)

Title: Question on Models for International Network Planning.

Considering

(a) that each country aims at handling its own international traffic in an optimal way taking into account, among other things, the existing structure of accounting rates;

(b) that the existing planning procedure and structure of accounting rates may lead to a non-optimal configuration of the international network and may also result in an uneconomic balance between transit and direct traffic as well as among the various transmission facilities;

(c) that optimization of the international network is expected to bring about reduced costs for Administrations, implying lower costs for customers and thereby stimulating international traffic;

(d) that planning models would be an adequate tool to ensure more efficient use of international traffic routing facilities,

it is suggested that the following supplementary question on international network planning should be studied in order to promote further present CCITT studies in this field.

Question:

- 1 What is the most suitable design for planning models, taking into consideration all financial and economic factors?
- 2 What impact would such planning models have on the international network?

Note: It is understood that:

a) in answering the Question Study Group II will only be able to recommend possible methods for the optimization of the international network as the actual routing depends on the decision of the Administrations concerned;

b) Study Group II can only identify those accounting problems which have a bearing on the optimization of the international network and forward them to Study Group III;

c) as regards the scientific methods of network planning the work carried out in GAS 3 for the Network Planning Handbook should be taken into account;

d) the work carried out on Question Z/II should be taken into account.

Questions I, J, K, R and X are considered to be urgent.

Note by the Secretariat

The Plenary Assembly also adopted the following new Question:

Question Z/II (new)

Title: Preparation of a Handbook on "Service quality, network maintenance and management".

Note: This Question is identical to Question F/IV. SG II will study especially aspects related to service quality and network management. SG II and IV will consider jointly the outline of the subject to be dealt with, the plan of the Handbook, and working methods to be used for preparing the Handbook.

Annex 1
(to Question Z/II = F/IV)

A handbook on network management might have the following structure:

- 1 Fault detection and statistics in switching centres;
- 2 Modification of operational parameters (timing, etc.) in the light of real-time statistical data;
- 3 Call routing management and supervision;
- 4 Composition and operation of network management centres;
- 5 Composition and operation of maintenance and repair centres.

Annex 2
(to Question Z/II = F/IV)

One of the principal objectives of any Administration or recognized private operating agency is to provide its users with a good or even excellent quality of service. But this objective is difficult to attain and many Administrations would like to have guidelines on the subject, in particular from Administrations which have been able to establish high-quality networks.

A Handbook should be prepared dealing with the following points (the list is not exhaustive):

- service quality parameters,
- service quality measurements,
- setting of targets and follow-up of their attainment,
- maintenance methods,
- traffic management,
- network management.

Study Group III (Relevant document: AP VII-No. 67)

Question E/III

Insert "(which would include continuation of the study of Recommendation D.6)" after the title.

Question X/III

To be studied by the Regional Tariff Groups.

Question W/III

Idem.

Question AA/III

To be studied by JWP SMM.

Questions E, S, T and Y are considered to be urgent. A footnote was to be added to Questions X and W saying that they are considered to be urgent for Tariff Group TAF.

Study Group IV (Relevant documents: AP VII-Nos. 27 and 30)*Question 7/IV*

Proposed new text taking into account Question 12/CMBD.

Question 7/IV

Keeping Volume IV of the CCITT Book up to date (continuation of the study of Question 7/IV, 1964-1980; revised wording).

Considering that changes in systems and equipment, introduction of new testing equipment and changes in methods required as a result of working experience lead to the need for changes in the Recommendation and therefore that the Recommendations should be reviewed regularly by an Editing Group which should take account of proposals from Study Group IV, Working Parties and other sources:

- What changes should be made to the current Recommendations in this Volume of the CCITT Book as a result of the above-mentioned review?
- What changes should be made to the Recommendations as a result of decisions of the Plenary Assembly?
- What are the consequences of the modification of the four noise clauses in Recommendation G.222?

Note 1: The structured organization of the M series of Recommendations should be reviewed with the aim of identifying possible changes to meet future needs.

Note 2: In view of the fact that the CCITT is contemplating the replacement of the present four noise clauses of Recommendation G.222 by a new set of four noise clauses as indicated in the Note added to G.222, the Editing Group should consider the consequences of this replacement on the relevant existing Recommendations and check what inconsistencies between noise clauses in various Recommendations can be identified and removed.

(The study of this problem should be conducted under the guidance of Joint Study Group CMBD. Consequences and inconsistencies should be communicated to this Study Group.)

Question A/IV

Add the following note:

Note: Close coordination in the studies on service quality (Question T/II) and network performance (Question A/IV) is required.

Draft new Question E/IV (identical to Question 12/CMBD) was not retained. It is replaced by Note 2 to Question 7/IV (see above).

Questions 16, B, D and E are considered to be urgent.

Note by the Secretariat

The Plenary Assembly also adopted the following new Question:

Question F/IV (new)

Title: Preparation of a Handbook on "Service quality, network maintenance and management"

Note: This Question is identical to Question Z/II. SG IV will study especially aspects related to network maintenance. SG II and IV will consider jointly the outline of the subject to be dealt with, the plan of the Handbook, and working methods to be used for preparing the Handbook.

Annexes 1 and 2: Identical to Annexes 1 and 2 to Question Z/II (see above).

Study Group V (Relevant document: AP VII-No. 119, modified in respect of certain titles by Temporary Document No. 46/PLEN.)

Addition of the following Note to Questions 1/V, 5/V, 22/V, X/V and Z/V: "Question 22/V as well as Questions 1/V, 5/V, X/V and Z/V are to be studied in collaboration with CCIR Study Groups 3, 9 and 10".

Question 2/V

Amendment of the title and text of the Question: replace "interference voltages" by "unwanted voltages".

Question 22/V

Addition of a Note: "Administrations intending to submit new contributions on this Question should do so as soon as possible to enable Study Group V to communicate the necessary additional information to the CCIR before the final meetings in September-October 1981 for the studies being conducted by Study Groups 3, 9 and 10 in pursuance of Recommendation 64 (CF) of the World Administrative Radio Conference, 1979 (WARC-79)".

Note by the Secretariat

The Plenary Assembly decided that this Note, which would be useful only in the early stages of the study period, should not be added to Question 22/V, but that its contents should be incorporated in a circular by the Chairman to be issued right at the beginning of the study period (at the same time as Contribution No. 1 containing the Questions).

Question 26/V

Amendment of the title: Revision of the "Directives concerning the protection of telecommunication lines against harmful effects from electricity lines".

Questions 1, 5 and X are considered to be urgent.

Study Group VI (Relevant document: AP VII-No. 37)*Question 12/VI*

Delete "(new Question)" after title in AP VII-No. 37, page 6 and put instead "Continuation of Question 12/VI studied in 1977-1980)."

Study Group VII (Relevant documents: AP VII-Nos. 12, 104 and 116)*Questions 1/VII and 2/VII*

Add notes stating that these Question will be studied in collaboration with Study Group I for the operational aspects and Study Group III for the tariff aspects.

Question 5/VII

Add a note saying that this Question should be studied in close collaboration with Study Groups I and VIII for the operational aspects and VIII for the terminal aspects. The text of this Question should be annexed to Question 3/I and to Question 14/VIII. Questions 8/I, 9/I, 12/I, 19/I, 20/I and 21/I should have a note referring to the annex in Question 3/I.

Question 9/VII

This Question is to be studied in close collaboration with Study Group I, the technical aspects being studied by Study Group VII and the operational aspects by Study Group I under Question 2/I. The text of Question 9/VII is to be annexed to Question 2/I.

Question 27/VII

This Question is of interest to Study Group VIII.

Question 36/VII

Add a note saying "This Question should be studied in liaison with Study Group XVII (see Question 16/XVII)."

Question 38 bis/VII (provisional number)

Title: Single channel per carrier (SCPC) multiplexers

Text as in AP VII-No. 116, with insertion in the third line of the Question, after "2 kbit/s", of the following words "and digital leased circuits at recognized CCITT user rates".

Annex 1: reply to Question 28 of the period 1977-1980, contained in AP VII-No. 5.

Annex 2: text based on COM VII-No. 102.

Question 40/VII (X/XVIII) (see Document AP VII-No. 104)

Deleted, since results are already contained in Recommendations X.50 and X.51, and Questions 28/VII and 30/VII ask for further study in this area. Results of study under these Questions should be communicated to Study Group XVIII.

Question 41/VII

Numbering plan for public data networks (continuation of Question 4/VII, Geneva, 1976; amended at Geneva, 1980. Also concerns Study Groups II and XVIII).

Considering

(a) that the international numbering plan for public data networks is standardized in Recommendation X.121;
 (b) that further study on interworking with other public networks may require enhancements to the present recommendation;

(c) that the studies of numbering aspects for ISDN may have an impact on existing numbering plans;

What new recommendations or modifications to existing recommendations are required?

Questions 3, 10, 15, 20, 24, 26 and 27 are considered to be urgent.

New Study Group VIII (*merged Study Groups VIII and XIV*)

Relevant documents:

- i) SG VIII: AP VII-No. 89
- ii) SG XIV: AP VII-No. 79

i) **Questions of former Study Group VIII***Questions 3/VIII and 4/VIII*

To be transferred to Study Group IX (merged Study Groups IX and X).

Question 9/VIII

To be transferred to Study Group IX (merged Study Groups IX and X, with the following amendments to the title and text):

Title: Transmission Standards of Terminal Equipment Using International Alphabet No. 5

What standards should be set for the transmission characteristics of terminal equipment with International Alphabet No. 5?

Note: The case of terminals interfacing V-series modems is to be studied in Study Group XVII.

Question 12/VIII

Refers to the S series Recommendations, except telegraph apparatus and alphabets.

Question 14/VIII

Amend the text in AP VII-No. 89 as follows:

- add another *considering*, namely: “(c) that there is a study in Study Group VII on message handling facilities (see Annex).”
- in the Question, replace “broadcast videography” by “teletext (broadcast videography) and to serve message handling facilities?”.
- add Question 5/VII as an annex.

Question 20/VIII

Add a note: “This Question should be studied in collaboration with Study Group VII.”

Question 23/VIII

To be transferred to Study Group IX (merged Study Groups IX and X).

Question 24/VIII (new)

Title: Terminal Equipment for the Telewriting³⁾ Service

Considering

- that there is a need for a terminal (or a class of terminals) for the instantaneous transmission of man-made graphic information (e.g. handwritten text, drawings, etc.) drafted by subscribers connected to the telephone network;
- that such a system might be used for several applications, for instance:
 - between telephone subscribers via the speech channel, either simultaneously with the telephone conversation, or consecutive to the telephone conversation, or with both possibilities;
 - between a telephone subscriber and a computer and/or a data base, for instance for processing or storage of graphic information;
- that, if a decrease in transmission quality for the speech is involved, this decrease should be kept within acceptable limits.

What parameters should be studied and standardized for the provision of telewriting terminals?

In particular, the following points shall be considered:

- 1 Basic characteristics of the terminal equipment, identification of desired options.
- 2 Conversion of the graphic information into an intermediate signal (analogue, digital) suitable for transmission together with a speech signal.
- 3 Control procedures.

Note: The study should be carried out in cooperation with Study Group I (Question 20/I) and:

- with Study Group XVII, as far as transmission aspects are concerned (see Question 24/XVII);
- with Study Group VII, if data communication network aspects are concerned (Question 26/VII);
- Study Groups XII and XVI should be consulted on speech quality.

Annex: The same as the Annex to Question 20/I (see above).

Question 25/VIII (new)

Title: Enhancement of Teletex terminals for information retrieval applications.

Considering

- (a) that the Teletex terminal is a convenient, economic text communication terminal capable of using all languages based on the Latin alphabet with extension to non-Latin alphabets;
- (b) that enhancement of the Teletex service to offer retrieval of scientific and technical information from public or private data bases could be an important application, such as the UNESCO programmes on STI retrieval systems;
- (c) that Teletex terminals will be produced on a large scale and would appear suitable also for information retrieval applications,

it is desirable to study

the inclusion of any options to the Teletex terminal to facilitate its use for information retrieval applications.

Note 1: This study is of interest to UNESCO and other international organizations, e.g. ISO and IFIP (International Federation for Information Processing).

Note 2: The study of options for the terminal will entail consideration of corresponding modifications to the basic procedures.

3) The term "telewriting" ("téléécriture" in French, "telescritura" in Spanish) is provisional and might be revised at a later date (see Question 20/I).

ii) **Questions of former Study Group XIV**

General remark: In the French text, replace “facsimilé” by “télécopie” wherever it appears.

Question 1/XIV

To be merged with Question 13/VIII.

Question 8/XIV

To be merged with Question 12/VIII.

Question 15/XIV

Deleted.

iii) **New Question A/VIII/XIV**

Identical to Question 21/1 (see above), with Note 1 replaced by the following text:

Note 1: Study Group I will prepare a Recommendation on this subject, with the cooperation of Study Group VIII.

General note: The Questions will be renumbered before inclusion in Volume I of the *Yellow Book* and references to these Questions will be amended as required.

New Study Group IX (merged Study Groups IX and X)

Relevant documents:

- i) SG IX: AP VII-No. 49
- ii) SG X: AP VII-No. 40

Questions of Study Group VIII assigned to new Study Group IX: 3/VIII, 4/VIII, 9/VIII revised, 23/VIII: see above.

Question 6/IX

Delete “see Question 6/VII” under title. Replace “Transmission plans” by “Network plans” in title and text, and combine with Question 10/X.

Question 4/X

Combine with Question 9/IX.

Question 7/X

Combine with Question 7/IX.

Question 10/X

Combine with Question 6/IX.

Questions 14/X and 15/X

In the titles, replace “service” by “technical aspects of service”.

Questions 24/IX, 5/X and 14/X were considered urgent.

General note: The Questions will be renumbered before inclusion in Volume I of the *Yellow Book* and references to these Questions will be amended as required.

Study Group XI (Relevant document: AP VII-No. 26)

Question 8/XI

The text is amended as follows:

- a) Add *considering* 1:

“That CHILL was designed to be the optimum programming language for telecommunications.”

b) Add *considering* 9:

“That other high-level languages for similar purposes are being proposed and action has been taken to study extending the field of use, e.g. ADA, to telecommunications.”

c) Add a new item e)

“e) The promotion of CHILL in the applications where it is found to be suitable.”

Question 18/XI

Change number to 19/XI.

Question 19/XI (new)

This Question is to be renumbered 18/XI.

Title: Signalling for Satellite Circuits.

Considering

(1) that various methods of satellite operation can be anticipated,

(2) that satellite systems need to interwork with the terrestrial part of public networks, both national and international;

What, if any, new signalling and switching Recommendations are necessary to facilitate this interworking?

Annex
(to Question 18/XI)

Considering Study Group XI's Final Report (AP VII-No. 16) concerning Question 6/XI as it relates to the possibility of using R2 signalling via satellite links and considering that the application of this kind of signalling system to national networks using satellites could not be the optimal one, for the reasons given below:

a) The R2 Signalling System, when used in connections via satellite transmission links, is very slow and therefore increases significantly certain times, such as:

- call set-up time,
- holding time of common control equipment in telephone exchanges,
- post-dialling time of calls;

affecting also, less intensively, the occupation of toll and local transmission circuits, therefore decreasing the efficiency of those circuits.

b) The contributions presented to CCITT during the last two periods (1973-1976 and 1977-1980) were, principally, of a theoretical character and did not include any analysis of the results of field tests using real traffic.

c) The availability of the R2 Signalling System for use via satellite links was based on a model for international connections, where post-dialling time is very high, making the compelled signalling comparable to a non-compelled system (CCITT No. 5, for instance).

d) If the considerations concerning the present model (international calls) are extended to national calls, it is found that the post-dialling times involved will be much higher than those obtained with non-compelled signalling, the utilization of the latter type of system being therefore really advantageous (see CCITT Contribution No. 36 of the present period).

e) There are many severe constraints on the use of the R2 Signalling System via satellite links.

f) Up to the present, no country has used the R2 Signalling System at the same time on terrestrial and satellite links for national calls, except in very restricted traffic cases.

g) The use of higher speed non-compelled signalling systems instead of the R2 system could become technically and economically profitable.

Accordingly, further studies should be carried out to look for other signalling systems which could be used with satellite transmission links on national networks, in order to complement the Recommendations of Contribution No. 400 (AP VII-No. 25) and continuation of Question 6/XI – Satellite Signalling Systems – for further studies concerning the case of national networks is proposed.

Questions 12 and 13 are considered to be urgent.

Study Group XII (Relevant documents: AP VII-Nos. 52, 57 and 115)*Question 1/XII*

To be entitled "Future programme of work".

Question 4/XII

Even though Annex 4 was still in preparation by the UK it should, as an exceptional case, be accepted.

Question 5/XII

The addition proposed by Study Group XVI was approved (new paragraph 4, see AP VII-No. 57).

Question 5/XII

Note 2 proposed by Study Group XVI for addition to the Question was approved (see AP VII-No. 57).

Note by the Secretariat

The Plenary Assembly also adopted the following new Question:

Question 25/XII (new)

Title: Preparation of a Handbook on Voice-Ear Measurements.

Considering

(a) that one of the difficulties encountered in the implementation of national transmission plans lies in the selection and rational application of the subjective and objective voice-ear measurement systems recommended and used by the various telephone administrations;

(b) that a knowledge of the various recommended methods of voice-ear measurement would provide valuable assistance to the developing countries in the planning, modernization and maintenance of their telephone networks;

(c) that the present state of development of the studies and the differences in the figures yielded by subjective, objective and calculation methods of voice-ear measurement justify the hope that a standard system of objective voice-ear measurements meeting the requirements of a transmission plan will be elaborated in the not too distant future;

(d) that a thorough knowledge of the methods of measuring and calculating voice-ear test magnitudes will provide the developing countries with the necessary basis for improving the quality of telephone transmission on a regional and a world scale;

(e) that the spread of modern voice-ear measurement techniques will contribute substantially to the standardization of telephone networks and apparatus, and to the adoption of the most appropriate voice-ear measurement methods for each individual case;

the CCITT decides to study

the preparation of a Handbook entitled "Voice-Ear Measurements" containing a detailed account of the subjective and objective methods of voice-ear measurements that meet the requirements of the developing countries for the modernization and maintenance of their telephone networks and terminal equipments.

Annex
(to Question 25/XII)

The special purposes of this Handbook are:

- 1 to describe the main methods of subjective measurement (based on loudness and articulation), objective measurement and calculation for establishing voice-ear measurement parameters;
- 2 to provide an up-to-date analysis of the voice-ear measurement methods recommended for application, taking into account the requirements of the developing countries and including:
 - 2.1 a description of test and calculation methods;
 - 2.2 the design characteristics of measurement systems;
 - 2.3 the practical conduct of tests;
 - 2.4 field and laboratory test methods;
 - 2.5 the analysis and interpretation of results;
 - 2.6 a comparison between the value of voice-ear measurements obtained by subjective, objective and calculation methods;
- 3 to study and analyze the factors affecting transmission quality, for example, losses, echo, noise, distortion, crosstalk, etc.;

4 to provide technical and economic guidance for developing countries in the design and introduction of test apparatus and methods for the purpose of establishing criteria for the standardization of field and laboratory voice-ear telephone measurements.

5 The Handbook should be related to the studies on network planning and similar texts dealt with in other CCITT Handbooks, in particular those prepared by Special Autonomous Group GAS 3 in coordination with Study Group XII.

Questions 15/XII and 19/XII are considered to be urgent.

Study Group XV (Relevant documents: AP VII-Nos. 76 and 104)

Question 4/XV

Add a footnote:

Note 8: The study of Part B of this Question should be undertaken in cooperation with the studies carried out by Study Group 11 of CCIR concerning Question 29-1/11 in order to avoid any possible overlap. To this end, exchange of information and direct contacts between the Study Groups should be ensured to delineate the respective study domains.

Question 27/XV

Add a *Note 4* taken from AP VII-No. 114, page 6, last paragraph (CMBD reply to Q.1).

Question K/XV

Add a footnote:

Note 3: In view of the fact that the CCITT is contemplating the replacement of the present four noise clauses of Recommendation G.222 by a new set of four noise clauses as indicated in the Note added to G.222, the Study Group should consider the consequences of this replacement on the relevant existing Recommendations and check what inconsistencies between noise clauses in various Recommendations can be identified and removed.

(The study of this problem should be conducted under the guidance of Joint Study Group CMBD (Question 12/CMBD). Consequences and inconsistencies should be communicated to Study Group XV.)

Question A/N (O/XV)

Cancelled for Study Group XV, but retained in the study programme of Study Group XVIII for the period 1981-1984 (Questions P/XVIII and Q/XVIII), prior to transfer to Study Group XV for the subsequent study period.

Question P/XV (= former S/XVIII)

Question Q/XV (= former M/XVIII)

Question R/XV (= former N/XVIII)

Questions S/XV (= former U/XVIII)

Question T/XV (= former V/XVIII)

Transfer to Study Group XV is confirmed.

Question U/XV (new)

Cancelled and replaced by Note 3 to Question K/XV.

Questions 25, 27, 28 and N/XV

Transfer to JWP/LTG is confirmed.

Note by the Secretariat: The Plenary Assembly also adopted the following new Question:

Question V/XV (new)

Title: Collection and Updating of Information Relating to Optical Fibre Telecommunications.

Note: As of 1981 this information is to be used for publishing in the Telecommunication Journal a series of articles which will be gathered together in a brochure and, subsequently, for updating the texts in that brochure.

Questions 21, 22, 28, 34, 36, M, P, S and T/XV are considered to be urgent.

Study Group XVI (Relevant documents: AP VII-Nos. 57, 56 and 113)*Question 1/XVI*

New wording

Title: Transmission Impairments in the Evolving Network

(Continuation of Question 1/XVI studied during the 1977-1980 study period, reworded)

Considering that

- (a) Study Group II is revising the routing rules during the 1981/84 period;
- (b) the telephone network will be a mixture of analogue and digital circuits and exchanges for a significantly long period before it becomes wholly digital;
- (c) that significant impairments are likely to be quantizing distortion, delay, attenuation-distortion and also digital speech interpolation (or other techniques that could change the characteristics of a connection during a call, e.g. voice packeting);
- (d) an increase can be expected in the number and sophistication of non-speech services over the switched telephone network in advance of the introduction of extensive integrated services digital network, and that such non-speech services could be affected by the increased impairments,

the CCITT has decided to study

(1) What changes are necessary to the hypothetical reference connections to model the changes and effects foreseen in the consideranda?

(2) What recommendations can be made to control the effect these changes could have on both the telephone service and the non-speech services carried by the switched telephone network?

Specific points for particular study are:

a) The effect of introducing coding techniques for telephony other than those described in Recommendation G.711. For example:

- reduced bit rate or number of bits/sample;
- delta modulation, ADPCM;
- code converters.

b) The use of circuits for non-telephony applications including the alternative use of an established connection for various non-speech services. For example:

- data transmission;
- Telefax;
- Videotex.

c) A provisional planning rule concerning PCM digital processes is given in Recommendation G.113 (section 3). Can this rule be confirmed and its provisional status removed?

d) Recommendation G.113 (section 3) provides information on the number of units of quantizing distortion produced by various digital processes. Can additional processes be identified and, if so, can the respective number of units of quantizing distortion be specified?

e) With the incorporation of digital processes in the telephone network, what is the effect of random bit error on speech transmission?

f) The attenuation/frequency characteristics of the band-pass filters used with PCM equipment are specified in Recommendation G.141 (section 1). These filter characteristics apply to cases where the PCM equipment is used to provide trunk junctions (toll connecting trunks), trunk circuits (intertoll trunks), and international circuits. Where PCM equipment is to be used in local networks, what recommendations should be made with regard to the attenuation/frequency characteristics of associated band-pass filters? Is it to be assumed that the PCM equipment used in the local networks could participate in the establishment of international telephone connections? See Annex 4 to Question 5/XVI for information concerning attenuation distortion limits adopted by one Administration.

g) Transmultiplexers are expected to be used in the worldwide telephone network. What recommendations can be made with regard to planning rules for the introduction of such equipment to control any impairment they may introduce?

h) To ensure that measurements of the transmission properties of digital exchanges are reliable, appropriate tests and test arrangements should be specified. In this regard, what recommendations can be made with regard to such tests and test arrangements? Annex 1 provides relevant information on this subject.

The reply to Question 10/XVI of the 1977-1980 study period is given in Annex 2 to this Question. Some of the material is also relevant to the study of Question 5/XVI.

Annex 1
(to Question I/XVI)

This Annex will reproduce Contribution COM XVI-No. 115, pages 39 to 47, with minor amendments and replace page 42 and the top of page 43 (up to "...give the errors directly") by AP VII-No. 113, page 74 to 77 inclusive.

Annex 2
(to Question 2/XVI)

This Annex will reproduce the reply to Question 10/XVI in Part B of AP VII-No. 113 (pages 10 to 14), with the last sentence on page 14 amended to read:

"These will be included in the new Questions to be studied in the 1981-1984 study period."

Question 5/XVI

New wording

Title: Transmission Plan aspects of the Evolving Network

(Continuation of Questions 10/XVI and 16/XVI studied during the 1977-1980 study period)

Considering

- (a) that digital telephones, PBXs, remote line concentrators, local and main exchanges are either already in service or are planned;
- (b) that these new digital elements must interwork with the existing analogue parts of the networks;
- (c) that the objectives of the overall transmission plan must be preserved,

the CCITT has decided to study

What recommendations must be made concerning the new digital elements to ensure that connections in the mixed analogue/digital network comply with the objectives of the transmission plan in respect of the nominal values of transmission loss, differential loss, stability loss, echo loss, and corrected reference equivalents?

Specific points for particular study are:

a) Section 6 of Recommendation G.121 indicates that the transmission loss introduced by the combination of the R and T pads in the national extensions of Figure 3/G.121 (cases a) and b)) should provisionally be 6 or 7 dB. Should this provisional requirement be confirmed or should another objective be developed?

b) What value should be recommended for the corrected reference equivalents of digital telephone subscriber sets?

Note: For uniformity of representation, the corrected reference equivalents should be referred to a zero relative level point. Annexes 1 and 2 deal with this aspect.

c) Transmission plans for operation under mixed analogue/digital and all-digital conditions should also provide for operator assistance on international calls. What recommendations can be made concerning the transmission performance on such calls?

d) A number of Administrations have made available details of their new or amended national transmission plans which provide for the transition from predominantly all-analogue operation to mixed analogue/digital operation and ultimately to all-digital operation. Descriptions of five such plans are given in Annexes 3, 4, 5, 6 and 7. Descriptions of additional national transmission plans which provide for the transitions referred to are invited. This point can be regarded as being of a documentary nature.

e) National transmission plans developed for mixed analogue/digital and all-digital operation (except for subscriber lines) might require that provision be made for such operation below the local exchange level, i.e. within the local network. To provide for such operation, the question of locating and controlling devices such as pads for maintaining stability and echo on international connections must be dealt with. To this end, what recommendations can be made regarding the provision of the necessary control in the most effective manner, taking into account the presence of digital PABXs, remote line equipment, etc.? Annex 8 provides some preliminary views on this subject.

f) Differences in transmission loss of up to 8 dB between the two directions of transmission are to be permitted on international telephone connections under the provisions of Recommendation G.121 (§2.2). To establish what actual differences might occur in practice, Administrations are requested to submit data with regard to their national transmission plans to permit development of a table similar to Table 1 in Annex A to Recommendation G.121. The data in this case should apply to operation under all-digital conditions (except for subscriber lines). It should also be indicated whether greater differences in loss can occur under mixed analogue/digital conditions and, if this should be the case, the maximum difference that can occur should also be indicated. Annex 9 to this Question discusses one of the transmission aspects involved in this matter.

g) Recommendation G.101, § 4.2 describes various types of telephone circuit that can occur in an evolving network. Are further recommendations needed concerning the setting up and maintenance of such circuits, insofar as they affect the transmission plan? (Study Group XVI to cooperate with Study Group IV if needed.)

Some of the material in Annex 2 to Question 1/XVI is relevant to the study of Question 5/XVI.

The texts of the Annexes to Question 5/XVI are found in:

Annex 1 Contribution from the Danish Administration (AP VII-No. 113, page 35-39).

Annex 2 Contribution from the Federal Republic of Germany (AP VII-No. 113, page 40-41).

Annex 3 COM XVI-No. 68 from Canada – CTCA.

Annex 4 Contribution from France (AP VII-No. 113, page 41-48).

Annex 5 Contribution from New Zealand (AP VII-No. 113, pages 49-61).

Annex 6 Contribution from British Telecom (AP VII-No. 113, page 62-65).

N.B.: “UKPO” should be replaced by “British Telecom” in SOURCE and “BPO” should be “BT” in the table on page 64.

Annex 7 Contribution from the Federal Republic of Germany (AP VII-No. 113, pages 66-69).

Annex 8 Contribution from Canada – CTCA (AP VII-No. 113, pages 70-73).

Annex 9 COM XVI-No. 114 from NTT.

Question 8/XVI

Replace “studied” by “coordinated”.

Note by the Secretariat

The Plenary Assembly also approved the inclusion in Study Group XVI’s study programme of Question 7/XVI from the previous (1977-1980) study period, entitled “Revision of the manual on transmission planning of switched telephone networks”, with the addition of the following note:

“Particular attention should be given to the introduction of digital elements into an analogue telephone network.

Coordination with GAS 9 will be necessary to avoid discrepancies or needless repetitions.”

This Question will continue to bear the number 7/XVI and the two Questions proposed as 7/XVI and 8/XVI will be renumbered 8/XVI and 9/XVI respectively.

Questions 5/XVI and 8/XVI (new Questions 9/XVI) are considered to be urgent.

Study Group XVII (Relevant document: AP VII-No. 45)

Question 19/XVII

The text of the reply to former Question 1/CMBD, part B, section e) in AP VII-No. 114, page 6, should be added as an annex to this Question.

Question 24/XVII (new)

Title: Transmission of Telewriting over the Telephone Network

Considering

that Study Group I (Question 20/I) and Study Group VIII (Question 24/VIII) are studying “telewriting⁴⁾”, what are the transmission requirements for the exchange of man-made graphic information (such as handwritten text and drawings) when such information is conveyed over the telephone network?

Note: This Question should be studied in cooperation with Study Groups I and VIII.

Questions 3, 4, 13, 16, 19 and 22 are considered to be urgent.

Study Group XVIII (Relevant documents: AP VII-Nos. 104 and 30)*Questions S, M, N, U, V, T/XVIII*

Transfer to Study Group XV is confirmed.

Question B/XVIII

Add CMBD to the list of Study Groups to be informed (second paragraph of Question).

Add the following note to item 7 of point A:

Note: Study Group XVI is studying the network planning rules concerning the transmission performance effects of some of the above-mentioned devices, which will be used in mixed analogue/digital networks. Account should be taken of these studies.

Add the following note at the end of the Question: “The study of this Question will take account of considerations by CCIR Study Group 4 (reference to pertinent document).”

Question H/XVIII

Add below the title: “of interest to Study Group IV.”

Question X/XVIII

Deleted for both Study Groups XVIII and VII.

Draft new Question AB/XVIII (Plan Committee Question EU/2) was not retained, since the subjects concerned are already covered by several Study Group XVIII Questions.

All the Questions relating to the integrated services digital network (ISDN), i.e. Questions A, B, C, D and E/XVIII and, to some extent, Questions F, G, H, I and J/XVIII, as well as Question R/XVIII are considered to be urgent.

Joint Study Group CMBD (Relevant documents: AP VII-Nos. 56 and 114)*Question 2/CMBD*

Delete “new Question” under the title and insert: “(Continuation of studies during 1976-1980)”.

Question 12/CMBD

Amend the first two lines to read: “Considering that the CCITT is contemplating the replacement of the ...”.

Question 12/CMBD is considered to be urgent.

Joint Study Group CMV (Relevant document: AP VII-No. 97)

No change.

Joint Study Group CMTT

The full text of the Questions appears in Volume XII of the CCIR Book and a list of Questions is reproduced below.

⁴⁾ The term “telewriting” (“téléécriture” in French, “telescritura” in Spanish) is provisional and might be revised at a later date.

Committee B proposes that the list of Questions and Study Programmes to be published in Volume I of the CCITT book be taken from this text, indicating which CCITT Study Groups have an interest in which Questions. This should be performed jointly by the CCITT and CCIR Secretariats.

- a) Questions and Study Programmes as decided by the 1978 Plenary Assembly of the CCIR (Kyoto, 1978):

Question 13/CMTT

Standards for analogue system for the transmission of television signals over long distances

Study Programme 13A/CMTT	Characteristics and design objectives for international television circuits
Study Programme 13B/CMTT	Long-time waveform distortion in television circuits over long distances
Study Programme 13C/CMTT	Allocation of tolerances for colour television
Study Programme 13D/CMTT	Television reference chains for terrestrial and fixed satellite links
Study Programme 13E/CMTT	Noise modulation of television signals arising from carrier phase jitter

Question 14/CMTT

Standards for digital systems for the television signals over long distances

Study Programme 14A/CMTT	Digital transmission of television signals
Study Programme 14B/CMTT	Quality parameters for television transmission systems using digital or analogue-digital modulation
Study Programme 14C/CMTT	Laws of addition for impairments associated with all-digital and mixed analogue-and-digital transmission of television signals

Question 15/CMTT

Transmission of television signals over long distances by analogue transmission systems. *Methods of measurement, test signals and circuit parameters*

Study Programme 15A/CMTT	Insertion of test signals in the field-blanking interval of an analogue television signal
Study Programme 15B/CMTT	Automatic switching systems for television circuits
Study Programme 15C/CMTT	Availability of an international television circuit or chain
Study Programme 15D/CMTT	Automatic measurement and monitoring on television chains
Study Programme 15E/CMTT	Standard test signal for conventional loading of a television channel
Study Programme 15F/CMTT	Long-time waveform distortion in television circuits over long distances. <i>Methods of measurements and test signals</i>
Study Programme 15G/CMTT	Noise modulation of television signals arising from carrier phase jitter

Question 16/CMTT

Transmission of television signals over long distances by digital transmission systems. *Methods of measurement, test signals and circuit parameters*

Study Programme 16A/CMTT	Measurement methods for television transmission systems using digital or analogue and digital modulation
Study Programme 16B/CMTT	Application of insertion test signals to digital and mixed analogue and digital television circuits

Question 17/CMTT

Standards for analogue systems for the transmission of sound programme signals over long distances

Study Programme 17A/CMTT	Characteristics of signals sent over monophonic and stereophonic programme circuits
Study Programme 17B/CMTT	Compondors for sound-programme circuits
Study Programme 17C/CMTT	Transmission of sound programme signals over communication-satellite links

Study Programme 17D/CMTT	Estimation of transmission performances of sound-programme circuits shorter or longer than the hypothetical reference circuit
Study Programme 17E/CMTT	Characteristics of narrow-bandwidth sound-programme circuits
Study Programme 17F/CMTT	Noise in sound-programme circuits from the power supply

Question 18/CMTT

Standards for digital systems for the transmission of sound programme signals

Study Programme 18A/CMTT	Standards for the digital transmission of sound-programme signals
Study Programme 18B/CMTT	Standards for the use of a signalling channel time-multiplexed with digital sound signals

Question 19/CMTT

Transmission of sound programme signals over long distances by analogue transmission systems. *Methods of measurement, test signals and circuit parameters*

Study Programme 19A/CMTT	Method for the subjective assessment of impairment due to the characteristics of sound-programme transmission systems
Study Programme 19B/CMTT	Type of faults which must be considered in an international sound-programme circuit or chain
Study Programme 19C/CMTT	Noise modulation of sound-programme signals arising from carrier jitter
Study Programme 19D/CMTT	Examination of methods used for setting-up and monitoring of signal levels on sound-programme circuits, and derivation of characteristics for a conventional loading signal representing sound-programme signals

Question 20/CMTT

Transmission of sound programme signals over long distances by digital transmission systems. *Methods of measurement, test signals and circuit parameters*

Study Programme 20A/CMTT	Digital transmission of sound-programme signals. <i>Methods of monitoring and measurement</i>
Study Programme 20B/CMTT	Digital transmission of sound-programme signals. <i>Circuit characteristics</i>

Question 21/CMTT

Standards for transmission of signals with multiplexing of video, sound and other types of signal used for the television service

Study Programme 21A/CMTT	Transmission time differences between the sound and vision components of a television signal
Study Programme 21B/CMTT	Transmission of sound and picture signals by time-division multiplex or frequency division multiplex
Study Programme 21C/CMTT	Time-division multiplexing of special signals in the field-blanking intervals of an analogue television signal
Study Programme 21D/CMTT	Characteristics of video signals
Study Programme 21E/CMTT	Digital transmission of signals comprising a time-division multiplex television programme

Question 22/CMTT

High-definition television

b) Proposed amendments to the Study Programmes as per the Interim Meeting of Joint Study Group CMTT.

Study Programme 13A/CMTT (MOD I)	Characteristics and design objectives for international television circuits
Study Programme 13C/CMTT (MOD I)	Allocation of tolerances for colour television
Study Programme 13D/CMTT (MOD I)	Television reference chains for terrestrial and fixed satellite links
Study Programme 13E/CMTT (MOD I)	Noise modulation of television signals arising from carrier phase jitter

Question 14/CMTT (MOD I)

Standards for digital systems for the transmission of television signals over long distances

Study Programme 14A/CMTT (MOD I) Digital transmission of television signals

Study Programme (14D)/CMTT Performance of long distance digital circuits carrying broadcasting television signals

Question 15/CMTT (MOD I)

Methods of measurement, test signals and operational characteristics of analogue television transmission systems

Study Programme 15B/CMTT (MOD I) Automatic switching systems for television circuits

Study Programme 15C/CMTT (MOD I) Availability of an international television circuit or chain

Study Programme 15E/CMTT (MOD I) Standard test signal for conventional loading of a television channel

Study Programme 15G/CMTT (MOD I) Noise modulation of television signals arising from carrier phase jitter

Question 16/CMTT (MOD I)

Methods of measurement, test signals and operational characteristics of digital television transmission systems

Study Programme (16C)/CMTT Availability objectives applicable to television transmission systems using digital modulation

Question 18/CMTT (MOD I)

Standards for digital systems for the transmission of sound programme signals over long distances

Study Programme 18A/CMTT (MOD I) Standards for the digital transmission of sound-programme signals

Study Programme (18C)/CMTT Transmission of time-division-multiplexed sound-broadcasting signals on a digital transmission path

Study Programme (18D)/CMTT Performance objectives for international digital transmission links carrying sound-programme signals

Question 19/CMTT (MOD I)

Methods of measurement, test signals and operational characteristics of analogue sound-programme transmission systems

Question 20/CMTT (MOD I)

Methods of measurement, test signals and operational characteristics of digital sound-programme transmission systems

Study Programme 20B/CMTT (MOD I) Digital transmission of sound-programme signals. *Operational characteristics*

Question 21/CMTT (MOD I)

Standards for transmission of signals with multiplexing of video, sound and other types of signal used for the television service

Study Programme 21C/CMTT (MOD I) Time-division multiplexing of special signals in the field-blanking intervals of an analogue television signal

Study Programme 21D/CMTT (MOD I) Characteristics of video signals

Joint Working Party LTG (Relevant documents: AP VII-Nos. 3, 76)

Transfer of Questions 25/XV, 27/XV, 28/XV and N/XV to LTG as new Questions 1/LTG, 2/LTG, 3/LTG and 4/LTG respectively has been confirmed.

Question 3/LTG (28/XV) is considered to be urgent.

Joint Working Party SMM (Relevant document: AP VII-No. 100)*Question SMM/A (17/I) = G/II)**Question SMM/B (16/I = H/II)**Question SMM/C (AA/III)*

These questions should also be listed under Study Groups I, II and III with a note saying that they are entrusted to JWP SMM.

III. Subjects to be dealt with by the Special Autonomous Groups

The proposals below were made by Committee D and submitted directly to the Plenary.

- GAS 3 – Transmission systems.
 - Updating of, and additions to the Handbook.
 - Completion of the Handbook “General Network Planning”.
- GAS 4 – Primary sources of energy.
 - Revision of the 1969 GAS 4 Handbook.
- GAS 5 – Economic and social problems relating to telecommunication development (paragraphs 1, 2, 3, 4, 5 and 7 of the Annex to Document AP VII-No. 80).
- GAS 7 – Rural telecommunications.
 - Updating of, and additions to the Handbook.
- GAS 8 – Economic and technical impact of implementing a regional satellite network.
 - Preparation of a new Handbook.
- GAS 9 – Economic and technical aspects of the transition from an analogue to a digital telecommunication network.
 - Preparation of a new Handbook.

5.4 – REPORT BY COMMITTEE C TO THE PLENARY ASSEMBLY*(approved by the ninth Plenary Meeting)***BUDGET CONTROL AND FINANCIAL NEEDS FOR THE CCITT**

The Budget Control Committee, set up by the Plenary Assembly under the provisions of No. 442 of the International Telecommunications Convention, Malaga-Torremolinos, 1973, was given the following terms of reference:

- to determine the organization and the facilities available to participants in the Plenary Assembly;
- to examine and approve the accounts for expenditure incurred throughout the VIIth Plenary Assembly and to submit to the Plenary Assembly a report indicating as exactly as possible the estimated amount of Assembly expenditure.

In accordance with §§ I.4 and 8 g) of Resolution No. 1 (Additional Rules of Procedure of the CCITT) of the VIth CCITT Plenary Assembly, Geneva, 1976, the Budget Control Committee was also requested to examine the estimated financial needs of the CCITT for the study period 1981-1984, as submitted by the Director to the Plenary Assembly in accordance with the provisions of No. 416 of the Convention.

During the VIIth Plenary Assembly, the Budget Control Committee held two meetings and considered the different items of its terms of reference. As a result of its work, this Report is hereby submitted to the Plenary Assembly for consideration.

1 Organization of the Plenary Assembly

Committee C considered that the facilities made available to delegates and the organization of the VIIth Plenary Assembly were satisfactory.

2 Budget of CCITT meetings in 1980

Committee C took note of the budget for Study Group meetings in 1980 and for the VIIth Plenary Assembly, as approved by the Administrative Council at its 34th Session in 1979 and adjusted in accordance with Administrative Council Resolution No. 647. The budget amounts to 2 620 300.– Swiss francs, including 2 047 300.– Swiss francs for the Study Groups and 573 000.– Swiss francs for the Plenary Assembly. This budget does not, however, cover the costs of the General Secretariat common services which are charged to a special section of the Union budget.

3 Position as regards expenditure

Annex 1 hereto sets out the situation of the accounts of the VIIth Plenary Assembly as approved by the Budget Control Committee. The statement gives a breakdown of credits entered in the budget and expenditure incurred as at 19 November 1980. Commitments to expenditure until that date are also shown, together with estimates of the expenditure still to be envisaged for the VIIth Plenary Assembly.

The figures show total estimated expenditure of 558 000.– Swiss francs compared with 573 000.– Swiss francs provided in the budget approved by the Administrative Council and adjusted on the basis of Administrative Council Resolution No. 647 and Decision No. 388.

The Budget Control Committee noted that the expenditure of the Plenary Assembly will remain within the budget limits.

4 Expenditure incurred since the last Plenary Assembly

Committee C noted the information supplied by the Director concerning operating expenditure for the Secretariat from 1976 to 1980, and the expenditure arising out of meetings of Study Groups during the same period.



5 CCITT financial needs until the next Plenary Assembly

Committee C examined the Report of the Director of the CCITT setting out future requirements until the next Plenary Assembly and accepted the credit estimates contained in that Report¹⁾. It noted that the cost per week of meeting was estimated at 61 000.– Swiss francs – excluding common service expenditure – and that expenditure for the Study Groups in the period 1980-1984, together with that of the VIIIth Plenary Assembly, were estimated at 12 915 000.– Swiss francs. The Committee, however, wishes to draw the attention of the Plenary Assembly to the fact that the increase in the activities of CCITT meetings will certainly have financial implications for other parts of the Union budget. In particular, the efforts made by Committee A to consolidate the work of the Study Groups and to reduce to some extent their commitments in the coming years have not produced results suggesting that future CCITT expenditure can be either reduced or maintained at a foreseeable level.

6 Miscellaneous

In examining the CCITT costs analysis published by the Secretary-General for the information of the Plenary Assembly, the Budget Control Committee considered that the attention of the Plenary Assembly, the Administrative Council and all Member Administrations of the Union should be drawn to certain items of expenditure, having special regard to the impressive list of new Questions entrusted to the Study Groups and the increasingly heavy workload imposed upon them.

The main points to be stressed are as follows:

- the cost per week of CCITT meeting is estimated at 61 000.– Swiss francs, excluding common service costs directly connected with these meetings. The cost per day of meeting is therefore in the order of 12 000.– Swiss francs;
- the (direct) cost of CCITT meetings is roughly 2-3 million Swiss francs per annum; on the other hand, total CCITT costs, including the costs of the Secretariat and of the General Secretariat common services, amounts to about 11 million Swiss francs per annum;

ANNEX A

Situation of Accounts of the VIIIth CCITT Plenary Assembly

Budget		Expenditure at 19 November 1980				Difference	
		Staff Members	Engaged	Estimated	Total		
<i>Salaries and related expenses</i>							
13.101	Staff for meetings	141 000	122	130 245	18 633	149 000	- 8 000
13.102	Travel (recruitment)	40 000	-	5 121	9 879	15 000	+ 25 000
13.103	Insurance	4 000	-	3 900	3 100	7 000	- 3 000
		185 000	122	139 266	31 612	171 000	+ 14 000
<i>Premises and equipment</i>							
13.105	Premises, furniture, machines	15 000	-	20 380	7 620	28 000	- 13 000
13.106	Document production	200 000	127 949	4 400	60 651	193 000	+ 7 000
13.107	Office supplies and overheads	20 000	2 285	-	10 715	13 000	+ 7 000
13.108	Postage, telephone calls, telegrams	150 000	129 343	-	20 657	150 000	-
13.109	Sundry and unforeseen	3 000	387	-	2 613	3 000	-
		388 000	259 964	24 780	102 256	387 000	+ 1 000
		573 000	260 086	164 046	133 868	558 000	+ 15 000

Total, including expenditure for
Study Groups, 1980

2 620 300

2 602 700

- c) the cost of CCITT meetings between 1977 and 1980 has increased by more than 40% in relation to the cost of meetings from 1973 to 1976;
- d) the average unit production cost of the Common Services Department is as follows:
 - translation 112.- Swiss francs per page,
 - typing 25.- Swiss francs per page,
 - reproduction 0.03 Swiss francs per page.

It should be noted that more than a thousand copies of CCITT Study Group documents usually have to be distributed.

Committee C, besides laying this information before the Plenary Assembly, also wishes to draw the attention of Administrations to the fact that the workload of the CCITT Study Groups cannot be increased unless the financial means are forthcoming even if, to some extent, their efficiency and working methods are improved.

The Plenary Assembly is invited to approve this Report.

ANNEX B

Report of the Director of the CCITT Estimate of the Financial Needs of the CCITT until the VIIIth Plenary Assembly

Introduction

1 Chapter X, Article 74, No. 416 of the General Regulations of the Convention (Malaga-Torremolinos, 1973) provides that the Director of the CCITT, after consultation with the Secretary-General, shall submit for the approval of the Plenary Assembly an estimate of the financial needs of the CCITT up to the next meeting of the Plenary Assembly. According to the provisions of this Chapter X, No. 388 of the Convention, the Assembly is to approve this estimate, if appropriate, for submission to the Administrative Council.

2 The Additional Rules of Procedure of the CCITT, set out in Resolution No. 1 of the VIth Plenary Assembly, Geneva, 1976, specify that the "Report on the financial needs of the Committee until the next Plenary Assembly" shall contain (for information) a summary of the accounts for the years which have elapsed since the preceding Plenary Assembly and the "estimated expenses of the CCITT" to cover the financial requirements of the Committee until the next Plenary Assembly. Summaries of the accounts of past years will be found in Part II of the present Report and estimated expenses of the CCITT in Part III.

3 Lastly No. 417 of the Convention provides that the Director of the CCITT, when preparing the annual estimates of the Committee's expenses for inclusion in the annual budget of the Union, shall base himself on the estimate of the financial needs approved by the CCITT Plenary Assembly.

4 The terms of references of the Budget Control Committee are defined as follows in Chapter XI of the Rules of Procedure of Conference, Nos. 442-445 of the Convention:

- to determine the organization and the facilities available to the delegates at the Plenary Assembly (the information required will be supplied later in another document);
- to examine and approve the accounts for expenditure incurred throughout the duration of the Plenary Assembly (this information will, in due course, be set forth in a working document for the Budget Control Committee);
- to present to the Plenary Assembly an interim statement and, subsequently, at its last meeting, a final statement showing as accurately as possible the estimated expenditure of the Assembly, the latter statement to be transmitted, with the Assembly's observations, to the Secretary-General for submission to the Administrative Council.

PART I

Cost of the Operation of the Secretariat During the Period 1977-1980 and Budget Estimates for 1981

1.1 Since staff expenditure depends on the staff employed, which is decided by the Administrative Council, Appendix I/1 merely gives the figures for permanent staff from 1977 to 1980. There are also two unestablished posts of CCITT laboratory operator. The table shows that there has been no increase in staff since the last Plenary Assembly apart from two P.3 posts (filled since September 1980).

1.2 Owing to the centralization of budget items which consolidates the staff and general services costs of the various ITU organs, the summary of past expenditure can be given only for the Laboratory Reserve Fund (Appendix I/2) and the meetings expenses; the latter, however, are given in Part II of this Report.

The position of the Laboratory Reserve Fund is such that it will be possible to meet all expenditure on equipment which the Laboratory Working Party of Study Group XII and that Study Group itself might deem necessary.

APPENDIX I/1

**Permanent staff of the CCITT Secretariat and Laboratory,
as approved by the Administrative Council**

Grade	Number			
	1977	1978	1979	1980
D1	3	3	3	3
P5	5	5	5	4
P4	10	10	10	11
P3	1	1	1	2 ^{a)}
P2	1	1	1	1
G7	4 ^{b)}	4 ^{b)}	3	3
G6	15 ^{c)}	15 ^{c)}	16 ^{b) c)}	17 ^{b) c)}
G5	1	1	1	1
G4	1	1	1	1
Total	41	41	41	43

^{a)} Creation of two engineer posts.

^{b)} A G.6 post is filled by two persons working part-time (G.7 on a personal basis).

^{c)} Including two unestablished posts of laboratory operator.

APPENDIX I/2

Figures for the Laboratory Reserve Fund, 1976-1979

	Position on 1 January	Expenditure on equipping the laboratory	Receipts for calibration tests	Interest on investments	Position on 31 December
Position of Fund on 1.1.1976	169 306.—	37 231.10	64 102.50	1 043.60	197 221.—
Position of Fund on 1.1.1977	197 221.—	74 567.25	76 280.—	1 104.30	200 038.05
Position of Fund on 1.1.1978	200 038.05	64 655.85	45 560.—	— ^{a)}	180 942.20
Position of Fund on 1.1.1979	180 942.20	69 110.40	36 610.—	— ^{a)}	148 441.80
Position of Fund on 1.1.1980	148 441.80				

^{a)} The payment of interest into the CCITT Laboratory Reserve Fund was discontinued in 1978 (the ITU Financial Regulations contain no provision to justify such payment).

PART II

**Expenditure Incurred for Meetings of Study Groups
and for the VIIth Plenary Assembly**

2.1 The budgets for meetings in 1977-1980, taking into account the annual adjustments made by the Administrative Council in application of § 4 of Protocol I annexed to the Malaga-Torremolinos Convention, and also the meeting expenses actually incurred from 1977 to 1979, are shown in Appendix II/1.

In accordance with Articles 15 and 79 (Numbers 547 and 548) of the Torremolinos Convention, 1973, the cost of CCITT meetings is borne by all members, together with recognized private operating agencies and scientific or industrial organizations which have participated or have agreed to participate in meetings and the international organizations which have not been exempted under Administrative Council Resolution No. 574, as amended. For organizations other than members, the annual amount of the contributory unit is fixed by the Administrative Council at each of its sessions. This amount increased from 18 800.- Swiss francs on 1 January 1976 to 22 600.- Swiss francs in 1981.

2.2 The organization and facilities made available to participants in the VIIth Plenary Assembly and the interim statement of expenditure incurred for the Plenary Assembly will be communicated as soon as I am in possession of all the required data. They will be incorporated in a later document.

APPENDIX II/1

Expenditure for 1977 to 1979 and budget estimates for 1977 to 1980

	Budget 1977	Expenditure 1977	Budget 1978	Expenditure 1978	Budget 1979	Expenditure 1979	Budget 1980
Number of meetings		44		64		88	53 + AP
Number of days of meeting		172		284		439	231 + AP
<i>Salaries and related expenditure</i>							
Meetings staff	645 300	510 106	1 490 000	911 968	1 406 000	893 371	1 272 200
Common services staff ^{a)}	216 000	74 417	100 000	79 292	100 000	52 072	150 000
Travel (recruitment) insurance	14 000	6 597	30 000	21 740	32 000	25 012	30 000
	875 300	591 120	1 620 000	1 013 000	1 538 000	970 455	1 452 200
<i>Travel outside Geneva</i>							
Subsistence allowance Travel	—	37 340	200 000	120 088	162 000	198 776	39 000
Transport and despatch	—	37 340	200 000	120 088	162 000	198 776	39 000
<i>Premises and equipment</i>							
Premises, furniture, machines	—	4 940	30 000	—	37 000	81 119	31 000
Document production	360 000	166 658	410 000	351 077	352 000	693 377 ^{b)}	527 000
Office supplies and overheads	40 000	12 050	110 000	19 158	81 000	25 232	72 000
Postage	225 000	298 847 ^{c)}	510 000	491 308	427 000	546 589 ^{c)}	486 000
Sundry and unforeseen	8 000	77	20 000	5 489	25 000	9 344	10 000
	633 000	482 572	1 080 000	867 032	922 000	1 355 661	1 126 000
<i>Total cost of meetings</i>	1 508 300	1 111 032	2 900 000	2 000 120	2 622 000	2 524 892	2 617 200

^{a)} It was possible to recruit most English, French and Spanish interpreters in Geneva; payment by ITU of travel and recruitment expenses of Soviet and Chinese interpreters.

^{b)} Very heavy document production for final meetings of Study Groups.

^{c)} Heavy document production and increased postal charges resulted in excess expenditure for this budget item.

PART III

Financial Needs of the CCITT until the VIIIth Plenary Assembly**3.1 Expenditure on future Study Group meetings and the VIIIth Plenary Assembly**

It is advisable to determine the financial requirements for meetings of Study Groups and Plan Committees and also of Working Parties and Special Autonomous Groups.

3.1.1 The cost of meetings in the new period can be estimated accurately only when the Plenary Assembly has fixed the programme of activity for that period.

The determination of the CCITT's financial needs for the organization of meetings, however, gives rise to other major difficulties owing to several factors:

- a) the steady increase – which is, however, difficult to estimate in advance – in the number of contributions sent by Administrations and participating organizations, and hence the increase in the cost of document production and postage for despatch;
- b) the difficulty of predicting changes in the economic situation (variations in salaries and costs; postal rates, etc.).

Extrapolation on the basis of the expenses of previous years thus becomes more difficult and tentative and remains possible only in respect of expense items.

Before any attempt is made to calculate future requirements, it is therefore essential to define a policy and draw up a programme of meetings to be held. On this point lessons of vital importance may be learned from what happened during the present 1977-1980 study period.

3.1.2 Attention is drawn to the fact that the figures given in § 3.3.4 c) below for estimated expenditure in the next period 1981-1984 *do not include* the cost of supernumerary staff engaged for the General Secretariat Common Services for translation, typing and document reproduction or for other centralized services such as guards, messengers, telephonists, minute-writers, etc. All this expenditure is covered by credits entered in a special section of the budget (Section 17) covering the Common Services supernumerary staff needed for each year's conferences and meetings. The proportion of these expenses relating to CCITT meetings from 1981 to 1984 is estimated as follows:

1981	1982	1983	1984
(Swiss francs)			
1 950 000.–	2 900 000.–	3 000 000.–	2 700 000.–

3.2 Meetings in 1977-1980

3.2.1 Annex I to Document AP VII-No. 71, the report on the activities presented by the Director of the CCITT, gives a complete list of the meetings held, classified by Study Group. The analysis of that list can be summarized in Table 1 produced below:

TABLE 1

Year	Number of working days of meetings held (in and away from Geneva)		
	Meetings with interpretation	Restricted meetings and meetings with- out interpretation	Total
1976 ^{a)}	7	7	14
1977	123	67	190
1978	206	100	306
1979	161	295 ^{c)}	456
1980	143 ^{b)}	91 ^{c)}	234
Total	640	560	1200
i.e. No. of weeks	128	112	240

a) Meetings held after the VIth Plenary Assembly.

b) Final meetings of Study Groups, not including the VIIth Plenary Assembly.

c) Including teams of Special Rapporteurs and editorial groups.

3.2.2 *General considerations on the organization of meetings*

1) As for the duration of meetings, some Study Groups found that they did not have a sufficient number of meeting days to bring their tasks to a successful conclusion.

2) Certain difficulties regarding interpretation led to some complaints, which were presented in a very cooperative spirit: the credits for CCITT meetings were always calculated on the basis of one team of interpreters per Study Group, even if the Study Group had to split up into several working parties, meeting simultaneously. As a result, certain Working Parties in the most important Study Groups had to work without interpretation, in one language only. Some objections were made on grounds of principle by delegates whose knowledge of English was not sufficient for them to participate actively in the discussions.

On this point, the increasing participation of delegates using Chinese or Russian should also be noted. This involves the need at most meetings for interpretation in the five official languages of the Union.

3.3 *Programme of meetings for the period 1981-1984*

3.3.1 It is important to take all these lessons into account in preparing the programme of meetings for the next study period.

It has been agreed that a Plenipotentiary Conference should be held in October/November 1982.

At its 35th session (May 1980), the Administrative Council provisionally drew up the timetable of large conferences from 1981 to 1986 in broad outline.

Since the Administrative Council generally meets in May, the VIIIth Plenary Assembly might be held in autumn 1984 and, in accordance with the CCITT Rules of Procedure (Resolution No. 1, *Orange Book*, Volume I, page 197, § 5 d)), the final meetings of the CCITT Study Groups should therefore take place in the first six months of 1984 (perhaps even beginning at the end of 1983).

It is therefore in this time frame that the meetings will have to be organized, bearing in mind two important material conditions:

- a) coordination and use of premises available at ITU headquarters and in the CICG;
- b) production of documents and particularly of temporary documents during meetings. Experience has shown that when several important meetings are held at the same time (for example, CCITT and CCIR, or CCITT and a World Administrative Radio Conference), serious difficulties arise and documents are produced very late because of the excessive workload on the General Secretariat Common Services.

These two considerations leave only one choice: to arrange CCITT meetings at dates left free by the other conferences.

3.3.2 *Meetings in 1981*

A programme of meetings was already submitted to the Administrative Council by the Director of the CCITT for the preparation of the 1981 budget during the 35th session (May 1980).

The programme is based on the considerations set forth below which will be found in Document No. 5454/CA35-22 of 28 February 1980, pages 83-87.

For the Study Groups and their Working Parties and the Special Autonomous Groups credits have been requested for 32 weeks of meetings in Geneva in 1981. These meetings will enable the Study Groups:

- to have an initial discussion to determine the direction of the studies;
- to organize their work, setting up the necessary Working Parties, assigning questions for study to them and appointing Special Rapporteurs as required;
- to continue consideration of questions not disposed of during the previous study period and to consider urgent questions.

The meetings of Study Groups with common interests or dealing with related problems will be arranged, as in the past, so as to reduce travel by delegates.

The meetings are all to be held in ITU premises. Interpretation will be provided in the Union's five working languages, but on the basis of a single team of interpreters per Study Group (13 interpreters).

Having regard to the other conferences in 1981, the CCITT meetings should in principle be held during the periods March-April and June-July 1981. In the second half of 1981, adequate accommodation will not be available at Headquarters owing to the CCIR final meetings.

3.3.3 *Meetings in the period 1981-1984*

In view of the need during the period 1981-1984 to hold meetings *with interpretation* covering a larger number of working days than those of the preceding period, the following programme is proposed for examinations and approval by the VIIth Plenary Assembly:

Year	Weeks of meetings
1981	34
1982	65
1983	65
1984	38 + 2 for PA
Total	204

3.3.4 Estimated credits

a) On the basis of the draft budget for 1981 adopted by the Administrative Council – reproduced for information in Appendix III/1 to this Report – a week of meetings held in Geneva represents an average expenditure of 61 000.– Swiss francs, charged to the credits for CCITT meetings, at the 1st January 1980 (salaries and prices).

b) For the coming years, it should be remembered, first, that the number of contributions submitted by Administrations and other participating organizations is on the increase, while the proportion of delayed contributions, it is hoped, will decline; more documents will therefore have to be circulated. The cost of production and postage for documents will rise accordingly.

In the second place, a single team of interpreters will no longer suffice for certain large meetings of Study Groups with several Working Parties and two teams should be provided.

For the VIIIth Plenary Assembly, the estimate can be made only by extrapolation from the estimates for the VIIth Plenary Assembly (i.e. about 558 000.– Swiss francs).

c) On the basis of the above, the necessary budget allocations would come to the following totals in Swiss francs, a breakdown among different items being neither possible nor useful:

1981:	2 067 000 ²⁾	(budget adopted)
1982:	3 965 000 ²⁾	(estimate)
1983:	3 965 000 ²⁾	(estimate)
1984:	2 918 000 ²⁾	(+ VIIIth PA; estimate)
Total	12 915 000 ²⁾	Swiss francs

All these figures would of course have to be revised during the preparation of successive annual budgets, taking into account changes in salaries and prices.

d) It is assumed that all meetings of the Study Groups or their Working Parties will be held in Geneva; for meetings away from Geneva, the inviting country would have to bear *all additional costs* (travel, subsistence allowance, transport of machines and documents, etc.).

If the CCITT is to discharge its numerous duties, the budget estimates must provide the resources required to ensure that its work proceeds efficiently.

L. Burtz
Director of the CCITT

²⁾ Supernumerary staff engaged for the General Secretariat Common Services not included (see § 3.1.2).

APPENDIX III/1

(Extract from Document No. 5454/CA35-22 of 28 February 1980)

Section 13 CCITT Items		Expenditure 1979	Budget 1980 (Swiss francs)	Budget 1981
Recapitulation of credits for CCITT meetings				
This table includes the expenses of meetings staff, except for supernumerary staff in the common services of the General Secretariat (see Section 17).				
<i>Salaries and related expenses</i>				
13.101	Meetings staff	893 371	1 200 000	1 200 000
13.102	Travel (recruitment)	52 072	150 000	86 000
13.103	Insurance	25 012	30 000	30 000
		970 455	1 380 000	1 316 000
13.104	<i>Travel outside Geneva</i>			
13.104.1	Subsistence allowance	79 167	14 000	13 000
13.104.2	Travel	104 849	18 000	76 000
13.104.3	Transport and despatch	14 760	7 000	9 000
		198 776	39 000	98 000
<i>Premises and equipment</i>				
13.105	Premises, furniture, machines	81 119	116 000	15 000
13.106	Document production	693 377	527 000	242 000
13.107	Supplies and overheads	25 232	72 000	37 000
13.108	Postage	546 589	486 000	347 000
13.109	Sundry and unforeseen	9 344	10 000	12 000
		1 355 661	1 211 000	653 000
Total, Section 13		2 524 892 2 622 000 ^{a)}	2 630 000 ^{a)}	2 067 000 ^{a)}

^{a)} Supernumerary staff engaged for the General Secretariat Common Services not included.

5.5 – REPORT BY COMMITTEE D TO THE PLENARY ASSEMBLY

(as approved by the ninth plenary meeting)

CCITT TECHNICAL ASSISTANCE

1 General

1.1 In accordance with No. 440 of the International Telecommunications Convention (Malaga-Torremolinos, 1973) and the instructions laid down in Section 1.6 of the Additional Rules of Procedure of the CCITT (CCITT Resolution No. 1), the Plenary Assembly set up Committee D on CCITT Technical Assistance.

1.2 Committee D reviewed the following documents:

AP VII-No.	Source	Title
1	GAS 3	Final Report to the VIIth Plenary Assembly of the CCITT
2	GAS 3	Need for updating of the GAS 4 Handbook "Primary Sources of Energy"
28	World Plan Committee	Report of the VIIth CCITT Plenary Assembly
30	World Plan Committee	Questions referred to the CCIs
31	Director of the CCITT	Amendments to Resolution No. 1: Additional Rules of Procedure of the CCITT
33	Canada	Proposals on CCITT organization and working methods
41	Director of the CCITT	Report on the organization of the CCITT Study Groups
46	Director of the CCITT	Technical assistance by the CCITT
72	Director of the CCITT	Special Autonomous Groups
78	Director of the CCITT	Draft modifications to Resolution No. 3
80	GAS 5	Final Report to the VIIth Plenary Assembly of the CCITT – Part I
81	GAS 6	Final Report to the VIIth CCITT Plenary Assembly
86	Chairman of GAS 3	Supplement to the Final Report of the VIIth Plenary Assembly (AP VII-No. 1)
123	Canada	Role of the CCITT in the ITU's overall programme for assistance to developing countries – draft Resolution
124	Canada	Increased participation in CCITT Study Group work: Proposed draft Opinion

In addition to the above documents, the Committee reviewed the temporary documents of the Plenary Assembly which might be relevant to its work as well as its own temporary documents (see list in § 3.2.5 of Part I of the present Volume).

1.3 The Committee held four Plenary meetings on 17, 18, 19 and 20 November 1980. The summary records of the meetings of Committee D have been circulated in Temporary Documents Nos. 16/COM D, 19/COM D, 23/COM D and 24/COM D.

1.4 At the first and second Plenary Meetings, Committee D decided to set up two Working Parties, namely, Working Party D-1 and Working Party D-2, under the chairmanship of the Vice-Chairmen of the Committee:

- Working Party D-1: Mr. A. DARMAN (Indonesia)
- Working Party D-2: Mr. L. DI BENEDETTO (Argentina)

The terms of reference of Working Parties D-1 and D-2 were as follows:

D-1: to examine the action to be taken to increase CCITT technical assistance activities

D-2: to establish a list of subjects for study during the period 1981-1984 in connection with CCITT technical assistance activities.

1.5 At its third Plenary Meeting, Committee D requested a small Working Party under the chairmanship of Mr. BENEDETTI (Italy) to consider precisely how to deal with a subject which was extensively discussed at that meeting, namely change from an analogue to a digital telecommunication network.

2 Consideration of work carried out by the Special Autonomous Groups during the study period 1977-1980

2.1 At its first meeting, Committee D took cognizance of the results achieved since the VIth Plenary Assembly by the three Special Autonomous Groups, GAS 3, GAS 5 and GAS 6, which have been active during the present study period.

Documents AP VII-Nos. 1, 80, 81, 86.

2.2 Committee D noted the progress reports submitted by the Chairmen of the three GAS; it was impressed by the excellent work carried out within the time limits set, and by the perfect cooperation existing between the three GAS and many CCITT Study Groups (and certain CCIR Study Groups in the case of GAS 3).

In commending the Chairmen, Vice-Chairmen and members of the GAS on the work done by their respective Groups, Committee D proposes that the Plenary Assembly should approve reports on their activities.

3 Action to be taken to increase CCITT technical assistance activities

After a broad exchange of views following completion of the work carried out by its Working Party D-1, Committee D submits to the Plenary Assembly for approval a draft Resolution entitled "CCITT technical assistance to the developing countries".

This draft Resolution is contained in Annex A hereto.

4 List of subjects for study during the period 1981-1984 in connection with CCITT technical assistance activities

4.1 Committee D examined Documents AP VII-Nos. 72, 41 and 78. Following a broad exchange of views, the methods of organization for handling the subjects adopted for study were defined.

A distinction was considered necessary between:

- i) work to be done by a Special Autonomous Group;
- ii) studies for which a Study Group is responsible;
- iii) and, possibly, the treatment of subjects for which information of a general nature but of high quality had been recognised as sufficient but which did not need a formal consensus with the CCITT. Such information could be provided, for instance, by the publication of articles in the Telecommunication Journal, with the subsequent issue of small fascicles reproducing their content, or of "Contributions" (white Study Group documents).

4.2 The subjects to be adopted for study during the period 1981-1984 were first considered by Working Party D-2 and then submitted to Committee D, which confirmed and clarified the guidelines advocated by that Working Party.

A list of the subjects adopted with their assignment to one of the three categories i) to iii) above was drawn up during the third and fourth meetings and is given in Annex B hereto.

4.3 Annexes C, D and E specify:

- the terms of reference of GAS 8 (Annex C),
- the terms of reference of GAS 9, and
- the precise allocation of responsibilities between GAS 3, GAS 4 and GAS 7 with regard to the study of low consumption transmission equipment (Annex E).

ANNEX A

RESOLUTION

CCITT technical assistance to the developing countries

The CCITT,

considering

(a) that one of the purposes of the Union is to “foster the creation, development and improvement of telecommunication equipment and networks in developing countries by every means at its disposal, especially its participation in the appropriate programmes of the United Nations” (No. 19 of the International Telecommunication Convention, Malaga-Torremolinos, 1973);

(b) that another of the Union’s purposes is to “undertake studies, make Regulations, adopt Resolutions, formulate Recommendations and Opinions and collect and publish information concerning telecommunication matters” (No. 21 of the Malaga-Torremolinos Convention, 1973);

(c) that Nos. 72 and 309 of the Malaga-Torremolinos Convention, 1973, provide that “in the performance of its studies, each Consultative Committee shall pay due attention to the study of Questions and to the formulation of Recommendations directly connected with the establishment, development and improvement of telecommunication in developing countries in both the regional and international fields”, and that “at the request of the countries concerned, each Consultative Committee may also study and offer advice concerning their national telecommunication problems. The study of such problems should be in accordance with 308”;

considering further

(d) that the VIth CCITT Plenary Assembly expressed the following views:

“... considers it important to emphasize the need for full cooperation by *all concerned* in the organization of seminars and training sessions” and “hopes that the CCITT will be able to play an ever more active part in this field”;

(e) the Report by the Director of the CCITT to the VIIth Plenary Assembly;

(f) the work already carried out or planned in the field of technical assistance by various Administrations, such as their participation in Study Groups, Special Autonomous Groups, Regional Study Groups, Plan Committees, etc.;

(g) that the variations in the workload of the CCITT Specialized Secretariat makes it possible, between the peak loading which occurs at the time of the interim and final Study Group meetings and of the Plenary Assembly, for the services of technically qualified members of the CCITT Specialized Secretariat to be employed for the benefit of developing countries, while at the same time widening and updating the practical experience of this staff,

recognizing

(h) that developing countries have urgent need to evolve their telecommunication networks and services in a most efficient and cost effective manner, thereby achieving their national aspirations and goals improving their ability to communicate nationally and internationally in this era of technological revolution;

(i) that it is essential to optimize the utilization of such valuable resources as the expertise of Administrations and available funding within limited time frames;

(j) that, for various reasons, the Administrations of developing countries are not in a position to send delegations to the meetings of the CCIs or send only very few participants, which means that they are unable in many respects to derive full benefit from the discussions,

resolves

(1) that in order to improve technical assistance and technical cooperation, particularly for developing countries, the Director of the CCITT, in accordance with Article 12 of the Convention, should propose to the Coordination Committee programmes of seminars of special interest to developing countries, for implementation through the Technical Cooperation Department (TCD) of the ITU General Secretariat, the TCD being the focal point for technical cooperation within the ITU;

(2) that the CCITT, in consultation with the Study Group Chairmen, as well as the Chairmen of Special Autonomous Groups and Regional and World Plan Committees, should endeavour to assist the TCD in its technical cooperation activities;

(3) that the ITU General Secretariat and the other organs of the ITU should help the developing countries in identifying areas in which technical assistance is urgently needed;

(4) that in intervals between peak pressure in the workload of the CCITT Specialized Secretariat, the Director of the CCITT should:

invite the Secretary-General to consider the possibility of calling upon the services of appropriately qualified engineers of the CCITT Specialized Secretariat for the purpose of short-term technical assistance missions undertaken by the ITU under the aegis of the United Nations Development Programme in conformity with the programming of the Technical Cooperation Department of the ITU General Secretariat, in cases where other suitable experts are not readily available;

(5) that the Administrations of the developing countries should take more active part in the activities of the CCITT Study Groups, Special Autonomous Groups and Plan Committees,

- a) by participating and sending reports and contributions to the CCITT for consideration by the relevant Study Groups, bringing out clearly the characteristics of the respective areas which may affect the corresponding studies,
- b) by sending delegates to Study Group and Plan Committee meetings, especially to seminars and symposia as well as the Special Autonomous Group meetings and by taking advantage of the participation of countries of the same region in such meetings,
- c) by collaborating to the fullest extent possible and in the spirit of Administration Council Resolution No. 448 relating to a plan for the implementation of telecommunication networks,
- d) by submitting from time to time to the Director of the CCITT, questions that they would like studied by the various CCITT Study Groups in accordance with No. 308 of the International Telecommunication Convention,
- e) by replies to the questionnaire issued by the CCIs and by the exchange, among themselves, of technical information on CCITT matters in areas of common interest;

(6) that in order to improve the flow of information from the CCITT to developing countries, the CCITT should:

- a) prepare the texts in the Volumes of the CCITT in as clear a manner as possible, with suitable explanations on the scope and purpose of Recommendations, with analytical tables and with adequate references to make it easier to trace texts dealing with specific subjects, particularly subjects of interest to the developing countries,
- b) arrange expeditious printing and publication of information papers such as handbooks and manuals of interest to developing countries based on studies undertaken by Study Groups, Special Autonomous Groups and Plan Committees, keeping the Administrations properly informed through appropriate circulars,
- c) include in the reports appearing in the working papers published after each interim meeting and in the Volumes of the CCITT published after each Plenary Assembly a section, as comprehensive as possible, especially devoted to problems of interest to developing countries;

(7) that, in accordance with the pertinent points of Resolution No. 1, the CCITT timetable of meetings should take account of preferences which might be expressed by countries remote from Union Headquarters for either the combination or the sequential grouping of meetings of several related Study Groups and/or their Working Parties over a period longer than the five to seven working days now customary for an isolated meeting of a Study Group or Working Party;

resolves further

(8) that the Director of the CCITT shall make an annual report to the Administrative Council on the implementation of this Resolution. In this report, the Director of the CCITT shall highlight what has been achieved in this area and lay stress on any difficulties encountered;

requests

the Administrative Council to consider the possibility of providing the CCITT with the necessary means to carry out the activities mentioned in this Resolution.

ANNEX B

SUBJECTS FOR STUDY BY COMMITTEE D AND THEIR ALLOCATION**I. Subjects to be dealt with by a Special Autonomous Group**

GAS No.	Title of the GAS	Remarks
GAS 3	Economic and technical aspects of the choice of transmission systems	Continue the study in progress and ensure updating (updating to be repeated later). (See also Annex E.) Complete drafting of the Handbook "General Network Planning".
GAS 4	Primary sources of energy	Conduct a comprehensive revision of the existing GAS 4 Handbook (published in 1969). (See also Annex E.)
GAS 5	Economic and social problems relating to telecommunication development	Study will be defined to points 1-5 and 7 in Document AP VII-No. 80. Moreover, the studies relating to the creation of a national telecommunication industry (particularly switching equipment) must be broadened to include studies on the "feasibility of establishing a regional telecommunication industry".
GAS 7	Rural telecommunications	Complete the studies in progress formerly by GAS 3 and update existing Handbook (see also Annex E).
GAS 8	Economic and technical impact of implementing a regional satellite network	See terms of reference of GAS 8 in Annex C.
GAS 9	Economic and technical aspects of transition from an analogue to a digital telecommunication network	See terms of reference of GAS 9 in Annex D.

II. Studies leading to the drafting of Handbooks but to be carried out by CCITT Study Groups

Subject	Study Groups concerned
Quality of service, network maintenance and management	To be dealt with in two parts: first part: Study Group II second part: Study Group IV
Voice-ear measurements (subjective or objective)	Study Group XII (or its "Laboratory" Working Party)

III. Subjects for which information of a general nature published in the form of articles by CCITT experts is considered sufficient

Subject	Study Groups concerned
Optical fibres	A "spate" of articles in a special issue of the Telecommunication Journal devoted to this subject is scheduled to appear in the autumn of 1981. These texts will then be printed separately in the form of a small booklet. Study Group XV will ensure that the information thus disseminated can subsequently be amended and updated.

ANNEX C

TERMS OF REFERENCE OF GAS 8

Economic and technical impact of implementing a regional satellite network

Having regard to the work concerning developments in satellite communication techniques which has already been carried out or is in progress in GAS 3¹⁾, GAS 7²⁾ and the appropriate CCITT and CCIR Study Groups, the terms of reference of GAS 8 shall be:

- 1 To identify and analyze (in a manner relevant to both developed and developing countries) the economic and technical impact of implementing a regional satellite network.
- 2 Studies carried out by GAS 8 shall:
 - a) cover the different types of satellite systems;
 - b) take into consideration both the technical aspects (particularly the conclusions of the CCITT and CCIR Study Groups) and the economic aspects of the subject;
 - c) assess the desirability of implementing regional telecommunication networks with or without satellite systems in the light of the measures to be taken for integration with existing networks.
- 3 To avoid duplication of studies, close coordination will have to be maintained between GAS 8 and the CCIR, particularly CCIR Study Group 4 which has set up a Group of Experts to prepare a Handbook on the fixed satellite service, and CCIR Interim Working Party PLEN/3 which is updating a special Report entitled "Possible broadcasting satellite systems and their relative acceptability".
- 4 It is recognized that a few case studies would help to clarify the conclusions of GAS 8.
- 5 The results of the studies by GAS 8 are to be set out in a Handbook to be published as soon as possible and not later than the VIIIth CCITT Plenary Assembly.

ANNEX D

TERMS OF REFERENCE OF GAS 9

Economic and technical aspects of the transition from analogue to digital telecommunication networks

Taking account of the work on Handbooks already done by GAS 6 and GAS 3 and of the Study Groups competent in this field as regards the evolution of switching and transmission techniques and general network planning, the terms of reference of GAS 9 are: to identify and analyze, in a way suitable for implementation by both industrial and developing countries, the problems related to the transition of telecommunication networks from analogue to digital. Studies should include the aspects of growth demand, coexistence between traditional and new equipment, and eventual replacement of existing equipment.

The results of the study are to be collected in a handbook, to be published as soon as possible.

Note 1: It is expected that a few case studies could assist this activity.

Note 2: A first pilot case, studied by a Joint Group of GAS 3 and GAS 6 under the guidance of Mr. Silverson (UK) and Mr. M'Baye (Senegal), concerns rural areas and it is almost completed. It is understood that this first case study will be published early in 1981. Another case study, for which preliminary work by the same Group has already been undertaken, could cover similar studies related to a medium-large urban area.

Note 3: Study Group XVI's study of Question 7/XVI consists in examining the ways in which digital elements can be introduced into an analogue telephone network. Close coordination will be necessary between Study Group XVI and GAS 8 on this point to avoid any discrepancies of views or needless repetition.

1) GAS 3 = Economic and technical aspects of the choice of transmission systems.

2) GAS 7 = Rural telecommunications.

ANNEX E

ALLOCATION OF RESPONSIBILITY AMONG GAS 3, GAS 4 AND GAS 7

as regards the study of low-consumption
transmission equipment

GAS 7 (Rural Telecommunications) will serve as a control group for the study that has been requested concerning low-consumption transmission equipment.

GAS 3 (Transmission systems) and GAS 4 (Primary sources of energy) will contribute to the above-mentioned study, working in cooperation with GAS 7.

FIRST MEETING OF COMMITTEE D

Monday, 17 November 1980, at 09.30 hrs

- 1 Opening remarks by the Chairman
- 2 Consideration of the work done by the GAS during the present study period
- 3 Technical assistance provided by the CCITT. Possible lines of action during the period 1981-1984

1 Opening remarks by the Chairman

1.1 The *Chairman* thanked the Committee for the honour it had paid both to him personally, to his country, the arab world and to the continent he represented in selecting him to the chair. With regard to the agenda, he suggested that the Committee begin its work by discussing only those parts of the final reports of the Special Autonomous Groups which dealt with the work actually completed and consider the remainder of the reports under the item dealing with possible lines of action during the period 1981-1984.

It was so agreed.

2 Consideration of the work done by the GAS during the present study period

2.1 *Special Autonomous Group 3* (GAS 3) (Documents AP VII-Nos. 1 and 86)

2.1.1 The *Chairman of GAS 3* (Mr. Wallenstein) introduced the report on work accomplished by GAS 3 during the study period 1977-1980 (Document No. 1, Part I). GAS 3 had been involved in the preparation of four handbooks. The first, on *Rural telecommunications*, had been published in 1979. A second, on local network planning, which had entailed the revision and updating of information contained in a handbook originally prepared by GAS 2, had also been completed and published in 1979. The *General Network Planning Handbook* represented a new venture for GAS 3. Much of the subject matter was also relevant to the work being carried out by GAS 6 and therefore close coordination had had to be maintained at all times in order to avoid overlapping. There had as a result been some delays but all the chapters of the new handbook were in the pre-final draft stage. Further details on the subject could be found in Document AP VII-No. 86. Finally, work was going ahead on the revision of the *Transmission Systems Handbook* in the light of the rapid advances being made in transmission technology, since current stocks of the existing manual were almost exhausted. Because the book touched on subjects that were being examined in ten CCITT and five CCIR Study Groups, close coordination had again been required. Also, work on a revised booklet on radiopropagation had had to be suspended because of the untimely death of Mr. Saxton, Chairman of CCIR Study Group 5. The Director of the CCIR had indicated that the final draft would be ready by the end of 1980.

2.1.2 The *delegate of Senegal* asked whether, in the case of the *Rural Telecommunications Handbook*, the necessary sensitivity studies had been carried out to determine which of the solutions proposed in Chapter 9 could be applied most economically.

2.1.3 The *Chairman of GAS 3* said that no detailed cost study had been carried out on the subject of Chapter 9 of the handbook. It might be useful, during the discussion of the future programme, to suggest the economic costing of the example given in that chapter.

2.1.4 The *Chairman* said that it might be more appropriate for a sensitivity study of different solutions to a problem to be included in a separate handbook, which could possibly be considered as a future CCITT activity.

The parts of the Report of GAS 3 relating to the work done during the present study period (Documents AP VII-Nos. 1 [Part I] and 86) were *adopted*.

2.2 *Special Autonomous Group 5 (GAS 5) (Document AP VII-No. 80)*

2.2.1 The *Chairman of GAS 5* (Mr. Longequeue) introduced the report of the Special Autonomous Group, which was self-explanatory. GAS 5 had been assigned six Questions during the last period, five of which had led to the preparation of texts for new chapters of the GAS 5 Handbook. GAS 5 had made every effort to keep publication costs as low as possible so as to ensure their wide distribution in the developing countries. The five documents had been completed and GAS 5 therefore considered its mandate at an end. He thanked all those who had helped the Group to carry out its assignments and whose assistance had been invaluable in ensuring that the texts produced were genuinely in the interests of the developing countries and geared to their particular problems.

2.2.2 The *delegate of Lebanon* asked what conclusions had been arrived at on the Question relating to the conditions required for the establishment of a national industry for the manufacture of telecommunications equipment (especially switching equipment).

2.2.3 The *Chairman of GAS 5* said that the subject was dealt with in detail in the corresponding document prepared by GAS 5, which was ready for printing.

The parts of the report of GAS 5 relating to the work done during the present study period (Document AP VII-No. 80) were *adopted*.

2.3 *Report of Special Autonomous Group 6 (GAS 6) (Document AP VII-No. 81)*

2.3.1 The *Chairman of GAS 6* (Mr. Ackzell) introducing the Group's report, stated that a 400 page handbook on the economic and technical aspects of the choice of switching systems was drafted and would be published early in 1981. He drew particular attention to Annexes 2 and 3 of the report, which described in detail the layout of the handbook. The Group had collaborated with the other Study Groups and Special Autonomous Groups in order to avoid overlapping. In thanking all those who had contributed to the preparation and drafting of the handbook in its various languages, he expressed his special gratitude to Mr. Mbaye, Senegal, who, as Vice-Chairman, had always been on hand to explain the special problems of the developing countries. The work of GAS 6 was now completed and the Group could be disbanded.

2.3.2 The *delegate of Lebanon* said that the successful termination of the handbook was due above all to the efforts of the Chairman and Vice-Chairmen. It was proof that willing collaboration between developing and developed countries could lead to very positive results. The handbook was an excellent reference work and, he hoped, would receive the widest possible distribution throughout the third world.

2.3.3 The *delegate of Senegal* expressed his profound gratitude to the Chairman of GAS 6. He also thanked the various Study Groups and other Special Autonomous Groups, the delegates of developing and developed countries and the members of the Secretariat, who had all contributed to the preparation of a magnificent handbook. GAS 6 having fulfilled its mandate, it seemed to him that the case studies should be pursued and completed within an *ad hoc* structure to be defined by Committee D.

The parts of the report of GAS 6 relating to the work done during the present study period (Document AP VII-No. 81) were *adopted*.

2.4 The *Chairman* drew the Committee's attention to Temporary Document No. 54/PLEN. from the Secretary-General of the ITU which contained a great deal of useful information which would help to prevent any ambiguities from arising in future discussions about technical cooperation activities.

3 **Technical assistance provided by the CCITT. Possible lines of action during the period 1981-1984** (Documents AP VII-Nos. 31, 33, 46, 123, 124; Temporary Documents Nos. 2/COM D (Rev. 1), 5/COM D, 9/COM D)

3.1 The *Chairman* suggested that the various documents should be introduced after which the Committee could have a short discussion in the time available and set up a working group to examine all the texts, produce a consolidated document and submit specific proposals at the next meeting of the Committee.

It was so *decided*.

3.2 *Document AP VII-No. 46*

3.2.1 The *Director of the CCITT*, introducing Document AP VII-No. 46, stressed that there was no competition between the CCITT's technical assistance activities and the technical cooperation work conducted in the ITU by the Technical Cooperation Department of the General Secretariat: on the contrary, there was total collaboration and complementarity between the two services.

The limited participation of developing countries in Study Group meetings, which were usually held in Geneva, and their difficulties in that respect were a well-known problem. One remedy might be for the regional telecommunications unions existing in Africa, Latin America and Asia to delegate a representative to such meetings to provide liaison with the CCITT in both directions. Another possible solution would be to set up a working party or sub-group in Study Groups to deal particularly with activities concerning the developing countries. Certain meetings might also be organized in the developing countries in the case of working parties responsible for questions of special interest to the developing countries.

It was necessary to improve the dissemination of information which now consisted almost solely of the contributions and reports of Study Groups. Those documents were very voluminous and did not provide easy and rapid

reading. An effort should be made to set up a more rapid and direct system of information, for example, by publishing a fairly brief monthly summary of the CCITT's main activities.

3.2.2 The *delegate of Romania* welcomed the assistance provided by the General Secretariat and the CCITT to developing countries on network planning. That assistance should be continued and a special effort should be made in regard to the new questions with which the developing countries were faced, particularly in connection with planning models for the international network, integrated services, digital networks and the development of telecommunications in rural areas.

3.2.3 The *delegate of Lebanon* also welcomed the excellent coordination of technical assistance in the ITU and expressed the hope that the ITU would continue to disseminate the technical knowledge that the developing countries needed.

3.2.4 The *delegate of India* said that the Director of the CCITT's suggestion that a brief monthly report should be published on CCITT activities was a good one. The planning of telecommunication networks in rural areas and the various possible alternatives for the power supply of telecommunications plants were two fields in which information would be particularly useful.

3.2.5 The *Secretary-General of the ITU* said that the proposed monthly report on CCITT activities might be published in the Telecommunication Journal.

3.3 *Temporary Document No. 2/COM D (Rev. 1)*

The *delegate of Brazil*, introducing Temporary Document No. 2/COM D (Rev. 1), said that the Technical Cooperation Department should continue to take primary responsibility for the ITU's technical cooperation activities and that it was essential for the CCITT to collaborate in the work of that Department.

To provide Administrations with more information about the organization and working methods of the CCITT, Resolution No. 1 should be inserted in the first document of each Study Group's series published after each Plenary Assembly. He also proposed that the CCITT should issue a document equivalent to that published by the CCIR, giving information on the national organizations of the various countries; that document had proved very useful to the developing countries. Specific action should be taken to facilitate access to CCITT texts, to update certain GAS Handbooks or prepare new ones, and to increase the participation of developing countries in the work of the CCITT.

3.4 *Temporary Document No. 9/COM D*

The *Chairman* read out the document, of which the Plenary Assembly had already taken note, and reminded the Committee of the conclusions drawn by the World Plan Committee with regard to the technical assistance which the CCIs should provide.

3.5 *Document AP VII-No. 31*

The *Director of the CCITT* said that it was proposed to revert to the former name of the Committee ("Technical Assistance") because the present name, decided on at the last Plenary Assembly, did not correspond to the purpose pursued, which was to assist all countries, in particular the developing countries.

3.6 *Documents AP VII-Nos. 33, 123 and 124*

The *delegate of Canada* introduced the three documents. Document AP VII-No. 33 contained Canada's views and proposals on the CCITT's methods of work and organization and on ways to improve its effectiveness. Document AP VII-No. 123 contained a draft Resolution on the role of the CCITT within the framework of the ITU's general assistance programme for the developing countries; the draft Resolution stressed the need for a single focal point in the ITU for technical assistance and technical cooperation programmes; that role should continue to be filled by the Technical Cooperation Department. Document AP VII-No. 124 dealt with means of increasing participation in the work of CCITT Study Groups.

3.7 *Temporary Document No. 5/COM D*

The *delegate of Tanzania* introduced the document, item 3 of which concerned the means of promoting participation by the developing countries in the work of the Study Groups.

3.8 *Temporary Document No. 2/COM D (Rev. 1)*

The *delegate of Brazil* introduced Annexes 5 and 6 to the document, containing draft Resolutions dealing respectively with assistance to the developing countries and the participation of CCITT Secretariat personnel in the work of technical cooperation.

3.9 *Temporary Documents Nos. 10 and 11/COM D*

The *delegate of Senegal* introduced the documents which were sponsored by several African Administrations. He stressed the great importance attached by those Administrations to the regionalization of certain questions and drew attention to the draft Resolution on technical assistance contained in Annex 1 to Temporary Document No. 11.

3.10 The *Chairman* noted that there seemed to be a consensus with regard to the documents presented. The real discussion would be held in the new Working Group D-1, which was about to be set up.

3.11 *Setting up of a new Working Group*

3.11.1 The *Chairman* opened the discussion on the setting up of a new Working Group, stressing that all duplication should be avoided between the Group's terms of reference and the subsequent discussions to be held in Committee D.

3.11.2 The *Secretary-General*, the *Director of the CCITT*, and the *delegates of Lebanon, Morocco, Senegal, Kenya, France, the United States of America, Italy, Argentina and Canada* took part in a long discussion on the precise terms of reference of the new Group, on the number and dates of its meetings, and on the room and interpretation facilities that might be provided. At the end of the discussion, it was *decided* to set up a Working Group D-1 under the chairmanship of Mr. Darman (Indonesia), whose task would be to make a synthesis of the documents submitted on the agenda item ("technical assistance"), taking account of the statements made during the present meeting. Group D-1 would be open to the participation of all delegations.

3.11.3 The *Chairman* said that the new Working Group D-1 should, in principle, report to Committee D at its Tuesday meeting. It was agreed that Committee D should hold an additional meeting on Thursday, 20 November, at 09.00 hours.

The meeting rose at 12.45 hours.

R. Chapuis
Secretary

M. Ali Belhadj
Chairman

SECOND MEETING OF COMMITTEE D

Tuesday, 18 November 1980, at 14.30 hours

- 1 Preliminary report of Working Party D-1
- 2 Organization of work for the GAS or equivalent Groups

1 Preliminary report of Working Party D-1 (Temporary Document No. 13/COM D)

1.1 The *Chairman of Working Party D-1* (Mr. Darman, Indonesia) said that a small preparatory group had met on the previous day and had prepared a draft Resolution on technical assistance to the developing countries, which had served as a basis of discussion for Working Party D-1 at its morning meeting. The draft Resolution was in the Annex to Temporary Document No. 13/COM D. Owing to lack of time, Working Party D-1 had been unable to complete its consideration of the draft Resolution.

1.2 The *delegate of Canada* said that the document submitted by the small preparatory group did not adequately reflect the ideas set out in Temporary Document No. 54/PLEN.

1.3 The *Chairman* said that, as had already been pointed out at the meeting of the Working Party, the French and Spanish texts of preambular §§ h) and j) of the draft Resolution were not in line with the English version, which was the basic text.

He therefore suggested that a small drafting group should be set up to formulate the draft Resolution properly and to examine those points on which Working Party D-1 had been unable to reach a conclusion. The small group might consist of the delegates of Algeria, Brazil, Canada and Kenya.

It was so *decided*.

1.4 The *Chairman* drew attention to those items which had been examined by the small preparatory group but were not mentioned in the draft Resolution [Temporary Document No. 13/COM D, §§ 3 b) i) and ii)].

1.5 Paragraph 3 b) i)

1.5.1 The *delegate of Cameroon*, referring to the suggestion that the money allocated to seminars might be more effectively used in holding Study Group meetings in a developing region, pointed out that the two types of meeting could be combined: whenever a seminar was organized in a developing region, a Study Group could meet after the seminar; that would ensure greater participation, since travel costs would be paid by UNDP and only subsistence expenses during the Study Group meeting would have to be met by countries.

1.5.2 The *delegate of Bangladesh* supported the suggestion.

1.5.3 The *Secretary-General of the ITU* said that the suggestion made might raise difficulties since UNDP drew a clear distinction between the projects it financed and the ordinary activities of international organizations. It exercised strict control to ensure that the credits it granted were spent only on the projects for which they were intended. Moreover, credits provided for seminars under Section 15 of the ITU budget were used solely to pay for interpretation services. Travel and subsistence costs could be financed only from UNDP or bilateral aid credits. Paragraph 3 b) i) should therefore specify which credits were involved.

1.5.4 The *delegate of India* said it was generally agreed that the developing countries considered seminars most useful to them. The resolution might therefore recommend the organization of seminars and leave settlement of the financial aspect to the Administrative Council.

1.5.5 The *delegate of Brazil* queried the wisdom of combining seminars with Study Group meetings, which were much more costly for the host country (translation and publication of a large number of documents, etc.). Moreover, the CCITT should beware of encroaching upon the functions of the Technical Cooperation Department.

1.5.6 The *delegate of the Federal Republic of Germany* said that the matter could be looked at from the opposite point of view, i.e. any country prepared to host a Study Group meeting could be invited also to organize a seminar since the additional cost would not place too heavy a burden on the host country.

1.5.7 The *delegate of Spain* stressed the need to assess the usefulness of seminars.

1.5.8 After an exchange of views, the *delegate of France* proposed the following text:

“In view of the acknowledged interest of seminars financed from UNDP or bilateral credits, and considering the usefulness of holding meetings of CCITT Study Groups in a developing region, the Director of the CCITT and the General Secretariat are requested to coordinate the dates and venues of such meetings and seminars in order to facilitate participation by developing countries.”

1.5.9 The *delegate of Tunisia* pointed out that seminars and Study Group meetings were not intended for the same participants: seminars had a didactic function, whereas Study Group meetings were attended by experts. What was the point, therefore, of holding those two types of meeting at the same time and place?

1.5.10 The *delegate of Lebanon* supported the French proposal and suggested that its scope should be broadened by addressing the request to the Secretary-General of the ITU and to the Coordination Committee; the CCIR and the IFRB also were concerned.

1.5.11 The *delegate of Denmark* also supported the French text and proposed that it should include the following:

“Furthermore, the Director of the CCITT should consider the feasibility of arranging symposia or training courses on specific subjects in connection with CCITT meetings held in the various regions, for example, meetings of the World Plan Committee, the Regional Plan Committees or the Regional Tariff Groups.”

1.5.12 The *delegates of Cameroon, Bangladesh and Guinea* supported the French proposal.

1.5.13 The *Chairman* noted that the French proposal had received broad support. The Editorial Group might review the wording, bearing in mind the observations and amendments submitted during the meeting, and decide whether or not to include them in the draft Resolution.

1.5.14 The *delegate of Morocco* expressed surprise that the draft Resolution should be retained despite the substantial objections raised by the Secretary-General of the ITU.

He entered reservations with regard to the French proposal.

1.5.15 The *Director of the CCITT* pointed out that the Editorial Group might wish to take account of Opinions Nos. 2 and 5 of the VIth Plenary Assembly which also were germane to the question under discussion.

1.6 Paragraph 3 b) ii) (Regional Working Parties)

1.6.1 The *Chairman* referred to the difficulties mentioned in the document and enquired what solutions might be adopted.

1.6.2 The *Senior Counsellor of the CCITT* said that it would be possible in respect of only a few of the Study Groups to consider the creation of regional Working Parties to deal with specific subjects. There should be no generalization, however, since the regions were perfectly free to take whatever decisions they deemed appropriate. In short, it was for Committee D alone to recognize the principle of establishing regional Working Parties, whereafter it would simply be a matter of proportions and financing.

1.6.3 The *Director of the CCITT* recalled that Regional Tariff Groups already existed (TAF, TAS and TAL). It was perfectly admissible, therefore, for a Study Group to follow that example by organizing meetings of regional Working Parties to deal with specific subjects if it were so decided, but only a small number of regions and Study Groups should be involved.

1.6.4 The *delegate of Lebanon* suggested that, to facilitate the work, any regional Working Parties set up in Study Groups should meet during meetings of the Regional Plan Committees.

1.6.5 The *delegate of Brazil*, supported by the *delegate of Argentina*, said that most of the difficulties experienced by Administrations arose from a lack of information, particularly as regards regional organizations already in existence. In the case of Latin America, therefore, it was a question of improving coordination with existing regional organizations. It was not a good idea to set up regional Working Parties of Study Groups since that would merely raise further difficulties as regards participation.

The meeting was adjourned at 16.25 hours and was resumed at 16.45 hours.

1.6.6 The *Chairman* suggested that the principle of establishing regional Working Parties of Study Groups might be adopted and countries left to decide on their creation if they considered it opportune to do so.

1.6.7 The *delegates of India, Cameroon and Brazil* supported the *Chairman's* suggestion.

Paragraph 3 b) ii) was adopted.

1.7 *Paragraphs g) and h) of the draft Resolution in the Annex to Temporary Document 13/COM D*

1.7.1 At the request of the *Chairman*, the *representative of the CCITT* read out both paragraphs to indicate the corrections that were needed in the French and Spanish versions which participants had before them.

1.7.2 *Paragraph 6*

The *delegate of Denmark* said he understood that the words "the combination of meetings" referred to consecutive and not to parallel meetings.

The *delegate of India* proposed that the words "for example" should be deleted from the first line of the paragraph.

Paragraph 6 was *adopted*, bearing in mind those two comments.

1.7.3 *Addition of a new paragraph*

The *delegate of Cameroon* proposed that the following new § 7 should be added at the end of the document:

(invites) ... "the Director of the CCITT to strengthen (in matters not covered by Resolution No. 12 or Opinion No. 5) his facilities for providing technical assistance to the developing countries in all fields and particularly with regard to:

- logistic support by the competent ITU services in the organization of regional meetings and of regional working parties of Study Groups;
- the participation in regional meetings of experts from specialized CCITT departments;
- the conducting of specific studies in the field;
- the organization of symposia and seminars."

1.7.4 The *delegate of Lebanon* asked whether Resolution No. 12 did not already cover the subject.

1.7.5 The *Director of the CCITT* said that the *delegate of Lebanon* was correct and that Resolution No. 12 and Opinions Nos. 2 and 5 dealt with those problems. The Editorial Group should confirm the fact.

1.7.6 The *Chairman* recalled the terms of reference of the Editorial Group, which had to ensure that the Resolutions and Opinions clearly stressed the responsibility of the different ITU organs concerned. He suggested that Temporary Document No. 13/COM D should be adopted in principle and that the Editorial Group be left to finalize it in the light of the suggestions made and of the documents still to be considered.

It was so *decided*.

2 Organization of work for the GAS or equivalent Groups (Documents AP VII-Nos. 72, 41, 78; Temporary Document 3/COM D)

2.1 *Document AP VII-No. 72*

2.1.1 The *Director of the CCITT* introduced the document and said that its purpose was to stimulate discussion on the creation of new Special Autonomous Groups having specific terms of reference which they should fulfil within a specified time.

2.1.2 The *delegate of France* supported the Director of the CCITT and proposed that the chronological order of the agenda items should be reversed so as to begin with the subjects which should be dealt with in the Handbooks before deciding to which Groups they should be assigned.

2.1.3 The *delegate of Lebanon* supported the proposal.

2.1.4 The *Senior Counsellor of the CCITT* said that, so far as the handling of subjects was concerned, a distinction should be drawn not only between Special Autonomous Groups and Study Groups since there were some subjects which, with all the implied savings to the budgets of the ITU and of Members countries, could be dealt with by the simpler and the swifter expedient of publishing a set of articles written by several authors. To take a specific example, any handbook on optical fibres drafted by a GAS might, in such a rapidly developing technological field, be obsolete by the time it left the press. Mr. M. Mili, Chairman of the Telecommunication Journal Editorial Board, had taken the initiative of planning a special issue of the Journal (to appear in autumn 1981) devoted precisely to optical fibres, the texts of which could be offprinted and sold at a modest price.

2.1.5 Replying to comments by the *Chairman of GAS 3* and the *delegate of France* concerning Document AP VII-No. 72, the *Director of the CCITT* again stressed the need to ensure that the GAS did not undertake excessively broad subjects, adding that he in no way intended his remarks as a criticism of GAS 3. Yet GAS 3 had set up a Working Party on rural telecommunications which was functioning more or less independently and could, for instance, become a new GAS.

2.1.6 The *Chairman* suggested that the discussion on Document AP VII-No. 72 should be adjourned. He requested that a list of all the subjects proposed in the documents should be drawn up and a distinction drawn between those of potential interest to Study Groups and those which might concern the Special Autonomous Groups. To that end, it might be useful to set up a Working Party to examine the list and assign the subjects to Study Groups, Special Autonomous Groups and "learned authors", as suggested in AP VII-No. 72 and recalled by the Senior Counsellor of the CCITT. The Working Party, entitled D-2, might meet under the chairmanship of Mr. Di Benedetto, the second Vice-Chairman of Committee D.

It was so *decided*.

The meeting rose at 17.35 hours.

R. Chapuis
Secretary

M. Ali Belhadj
Chairman

THIRD MEETING OF COMMITTEE D

Wednesday, 19 November 1980, at 14.30 hours

- 1 Approval of the summary record of the first meeting of Committee D
- 2 Subjects for study by GAS or equivalent groups – oral report by the Chairman of Working Party D-2

1 Approval of the summary record of the first meeting of Committee D (Temporary Document No. 16/COM D)

1.1 The *Chairman* suggested that the Committee should approve the summary record of its first meeting (Temporary Document No. 16/COM D) on the understanding that delegations wishing to make alterations should forward them to the Secretariat as soon as possible.

It was so *decided*.

2 Oral report by the Chairman of Working Party D-2

2.1 The *Chairman of Working Party D-2* (Mr. Di Benedetto, Argentina) recounted the conclusions reached by his Working Party with regard to the subjects for study.

– *Rural telecommunications:*

The question should be studied further and the Handbook updated.

– *General network planning:*

The Handbook at present being prepared by GAS 3 should simply be completed.

– *Transmission systems:*

The Handbooks prepared by GAS 3 should be revised; revisions should be made roughly every six years, although each Plenary Assembly should decide whether revision was opportune.

– *Service quality, network maintenance and management:*

The question should be examined by Study Groups II and IV.

– *Primary sources of energy:*

The Handbook published by GAS 4 should be updated.

– *Low-consumption transmission equipment:*

The study of the question should be divided among the Groups dealing with rural telecommunications, primary sources of energy and transmission systems.

– *Case studies* (Document AP VII-No. 81, pp. 7 and 9)

The Working Party had decided that it was for the Plenary Meeting to decide whether and how any such studies should be carried out.

– *Technical and economic aspects of the use of optical fibres:*

The question should be dealt with in articles in the Telecommunication Journal. Such articles would be constantly updated in the light of the work of Study Group XV.

– *Economic and technical impact of implementing a regional satellite network:*

The Working Party had considered that the question amounted to a request for technical assistance for the Africa Region.

– *Economic and social problems relating to telecommunication development:*

The study should be confined to points 1-5 and 8 proposed by GAS 5 (Document AP VII-No. 80, Annex 1), and to the feasibility of establishing a regional telecommunication industry – a subject proposed by the African countries – which would involve updating the GAS 5 Handbook.

– *Voice-ear measurements:*

Study Group XII would draft a handbook.

2.2 The *delegate of Saudi Arabia* said that he understood at the meeting of Working Party D-2 that the technical and economic aspects of the use of optical fibres would be the subject not only of articles in the Telecommunication Journal but also of fascicules issued at low cost for the developing countries.

2.3 The *Senior Counsellor of the CCITT* confirmed that such a procedure also was envisaged.

2.4 The *delegate of the Federal Republic of Germany* said it was important that the Handbooks should really meet the needs of the developing countries. In view of the difficulties those countries had in participating in ordinary meetings of the Study Groups, it would be better if the Handbooks were prepared by the GAS.

2.5 The *delegate of Lebanon* said that two questions raised by the World Plan Committee were of special importance to the developing countries: the economic and technical aspects of the transition from analogue to digital telecommunication networks and the economic and technical impact of implementing a regional satellite network; the latter issue concerned not only the African countries but almost all the developing countries.

2.6 The *delegate of Italy* had the impression that, in the opinion of Working Party D-2, the question of conversion to digital networks, in view of the rapid developments in that field, should be entrusted to a Study Group rather than to a GAS.

2.7 The *Chairman of GAS 6* said that, so far as was possible at the present stage, the question of digital networks was covered in the GAS 6 Handbook on switching systems and the GAS 3 Handbook on general network planning. It would be quite premature to prepare a Handbook on integrated services digital networks.

2.8 The *Chairman of GAS 3* (Mr. Wallenstein, United States of America) agreed with that observation.

2.9 The *Senior Counsellor of the CCITT* remarked that the question of conversion from analogue to digital telephone networks on the other hand could be the subject of a separate study. Admittedly, the question had been amply dealt with by GAS 6 from the standpoint of switching and by GAS 3 as regards transmission. Its economic aspects, however, covered both fields and the network as a whole, i.e. not only the nodal points (switching exchanges) but also the arteries.

2.10 The *delegate of Brazil* said that the question of digital networks should be entrusted to a GAS which would be required to draw up a handbook within a set period not exceeding a study period, and that the new handbook should be more widely disseminated than the existing Handbooks.

2.11 The *delegate of Cuba* supported that suggestion.

2.12 The *Chairman of GAS 6* pointed out that the GAS 6 Handbook already dealt with the economic aspects of integrated services networks. It was surprising that new work should be started before anyone had had a chance to see the results of what had already been done, i.e. the GAS 3 and GAS 6 Handbooks and he drew attention to their lists of contents.

2.13 The *delegate of India* stressed that the conversion to digital networks was of major importance not only to the developing countries but also to other countries.

2.14 After an exchange of views, the *Chairman* said that there seemed to be a majority in favour of preparing a Handbook on the economic and technical aspects of conversion from an analogue to a digital telephone network, a task which would be entrusted to a GAS.

It was so decided.

2.15 The *Chairman* remarked that Working Party D-2 had been unable to reach a final conclusion; he therefore opened the discussion on the continuation of case studies.

2.16 The *Chairman of GAS 3* said that it should be possible to provide the GAS responsible for studying the subject with the texts on the case studies already prepared by GAS 3 and GAS 6, as had already been suggested. The pilot case study undertaken jointly by those two GAS was almost complete and simply required a few alterations of form.

2.17 The *Chairman of GAS 6* drew attention to item 4.4 of his Group's report and to the need to establish precise terms of reference for the new Groups.

2.18 The *delegate of the United Kingdom* said that he was fully in favour of completing the pilot case studies already begun by GAS 3 and GAS 6. However, the meeting should not lose sight of the "profitability" of such studies which should illustrate the general characteristics needed to prepare specifications in the light of the conditions peculiar to each country.

2.19 The *delegate of Denmark* agreed with the two preceding speakers.

2.20 The *delegate of Jordan* said that Committee D should now turn to the allocation of responsibilities among various groups.

2.21 The *Chairman* wondered whether it would be better at the present stage to set up a small group to draft terms of reference rapidly for each title proposed or simply to examine the subjects themselves.

2.22 The *Senior Counsellor of the CCITT* said that, in view of the limited amount of time left, it might be preferable if any new small group set up did not have to establish terms of reference for all the GAS but confined itself to examining contentious points such as the advisability of pilot case studies.

2.23 The *delegate of Lebanon* said that considerations of the timeliness of conducting pilot case studies could be included in the terms of reference of the small group.

2.24 In view of those suggestions, the *Chairman* proposed that a Working Party D-3 should be set up under the chairmanship of Mr. Benedetti (Italy), consisting of the delegates of Lebanon, Algeria, Brazil, France, Sweden, Kenya, Jordan and Bangladesh.

It was so decided.

- 2.25 The *Chairman* then opened discussion on the question of regional satellites.
- 2.26 The *delegate of Lebanon*, supported by the *delegate of Jordan*, said that the subject should be properly circumscribed before the discussion got under way since it was a matter of studying the subject proposed by the World Plan Committee, particularly in § 8 of Document DT 1/COM D: "Economic and technical impact of implementing a regional satellite network."
- 2.27 The *delegate of the Federal Republic of Germany* recalled that the Director of the CCIR had already drawn attention to the work being done in that field by CCIR Study Group 4.
- 2.28 The *Chairman of GAS 3* concurred with that remark.
- 2.29 The *Senior Counsellor of the CCIR* confirmed that such studies were in progress in CCIR Study Group 4. As an example of cooperation between the CCIR and the CCITT in the work of the GAS, the CCIR had provided GAS 3 with the information needed for the preparation of its Handbook.
- 2.30 The *delegate of Lebanon* said that he recognized the need for CCIR participation. If in the present case the Study Groups were required to examine purely technical matters, it was because the economic and operational implications of implementing regional satellite networks were involved.
- 2.31 The *delegate of France* said that a clear distinction should be drawn between the technical and economic conditions for implementing such systems and the economic and technical impact they would have. The best solution would be to set up a joint CCITT/CCIR GAS to cover all aspects of the question as it had been formulated.
- 2.32 The *Chairman of GAS 3* said that, in his experience, studies as important as the present one conducted within the framework of a GAS would require the assistance of a large number of experts and that it was essential for the CCIR to be associated with such studies. Machinery should therefore be established to enable that organ to play an active, positive role. It was usually rather difficult, however, to secure the assistance of specialists, whatever the field of study involved.
- 2.33 The *delegate of Lebanon* said that in urging the creation of a group on regional satellites, he was merely reflecting the wishes of the 96 Member countries of the World Plan Committee.
- 2.34 The *delegates of Tanzania, Gabon and Bangladesh* stressed the value of the work of such a group for the developing countries.
- 2.35 The *delegate of Australia* said that he was not in favour of such studies because of their scope and complexity.
- 2.36 The *Chairman* said that the issue of the economic and technical impact of implementing a regional satellite network should be studied in view of the support it had received from a majority of countries.

It was so decided.

- 2.37 The *delegate of Brazil* proposed an addition to the Report of Committee D, which he would transmit to the Chairman of that Committee in due course.
- 2.38 The *delegate of the United Kingdom*, supported by the *delegate of Lebanon*, stressed that studies undertaken by a GAS should never exceed the length of a study period to ensure that the information given to developing countries was not obsolete by the time it appeared in print.
- 2.39 The *Chairman* said that that was indeed the Committee's intention. He read out the list of subjects, indicating the decision taken in each case. The list would be proposed to the Plenary Assembly and forwarded to the Chairman of Committee B.

The meeting rose at 18.00 hours.

R. Chapuis
Secretary

M. Ali Belhadj
Chairman

FOURTH AND LAST MEETING OF COMMITTEE D

Thursday, 20 November 1980, at 09.40 hours

- 1 Report of Working Party D-1
- 2 Report of Working Party D-3
- 3 Assignment of subjects to the GAS
- 4 Statement by the outgoing Chairman of GAS 3
- 5 Completion of the Committee's work

1 Report of Working Party D-1 (Temporary Document No. 18/COM D)

1.1 The *Chairman of Working Party D-1* introduced the Report of Working Party D-1 (Temporary Document No. 18/COM D) and the attached draft Resolution on assistance to the developing countries, which was the result of a consensus in the Working Party.

1.2 The *Chairman* invited the Committee to consider the draft Resolution in the Annex to the Working Party's Report.

1.3 It was *agreed* to amend the title to read: "CCITT technical assistance to developing countries".

1.4 The *Chairman of Committee A*, referring to *resolves* 7, observed that questions relating to the timetable of CCITT meetings came within the purview of Committee A. Since the paragraph had not been referred to that Committee for consideration, he had some doubt whether it should be retained in the draft Resolution.

1.5 Following a discussion in which the *delegates of Lebanon, Kenya, France and the Federal Republic of Germany* and the *Chairman of Committee A* took part, it was *agreed* to retain the text of *resolves* 7, subject to the insertion, at the beginning of the paragraph, of the phrase "Taking into account the relevant provisions of Resolution No. 1".

1.6 At the suggestion of the *Secretary-General*, it was *agreed* to replace "*invites*" by "*and requests*" at the beginning of the last paragraph.

1.7 The *delegate of Senegal*, supported by the *delegate of Lebanon*, proposed that the words "to consider the possibility of providing" in the last paragraph should be replaced by "to provide".

1.8 The *Secretary-General* expressed the view that it would not be appropriate to give instructions to the Administrative Council, particularly in respect of budgetary matters.

1.9 Following a discussion in which the *delegates of Senegal, Lebanon, Cameroon, India, Benin and Australia* took part, the *Chairman* suggested that no further changes should be made to the draft Resolution, to which a great deal of time and effort had been devoted by Working Party D-1.

It was so *agreed*.

1.10 Subject to minor editorial changes suggested by the *delegates of Australia and Morocco*, the draft Resolution was *approved* as amended.

1.11 The *delegate of Senegal* considered that the text which had just been approved overlooked the fundamental role of international cooperation to which reference was made in Temporary Document No. 11/COM D submitted by a number of African countries and did not fully cover the subject of technical assistance. In the view of his Delegation, its effectiveness would be considerably enhanced by the establishment of a standing working group, on which both developed and developing countries were represented, to monitor CCITT technical assistance activities.

1.12 The *delegate of the United Kingdom* expressed the hope that the Director of the CCITT would endeavour to improve the programmes of seminars, to which reference was made in *resolves* 1 of the Resolution, by, for instance, including fewer papers and providing more time for discussion between papers.

1.13 The *Chairman* thanked the Chairman and members of Working Party D-1 for their excellent work.

2 Report of Working Party D-3

2.1 The *Chairman of Working Party D-3* reported orally on the deliberations of his Working Party, which had concluded that a new GAS should be set up to study the economic and technical aspects of the transition from analogue to digital telecommunication networks. A document setting out the proposed terms of reference in greater detail was in the process of being prepared for distribution (Temporary Document No. 22/COM D).

2.2 The conclusions of Working Party D-3 were *approved*.

2.3 The *Chairman* thanked the Chairman and members of the Working Party for working so efficiently in such a short time.

3 Assignment of subjects to the GAS (Temporary Document No. 21/COM D)

3.1 The *Chairman* said that he had held informal discussions regarding the assignment of subjects to the GAS, on the basis of Temporary Document No. 21/COM D and taking into account the need to avoid overloading the GAS so that they could finish their work before the end of the next study period. As a result, he proposed the following division of subjects:

GAS 3: Transmission systems; low-consumption transmission equipment (primary responsibility)

GAS 4: Primary sources of energy; low-consumption transmission equipment (relevant aspects)

GAS 5: Economic and social problems relating to telecommunication development

GAS 7: Rural telecommunications; low-consumption transmission equipment (relevant aspects)

GAS 8: Economic and technical impact of implementing a regional satellite network

GAS 9: Economic and technical aspects of the transition from analogue to digital telecommunication networks

3.2 The *delegate of Benin* proposed that GAS 3, 4 and 7 should be merged, since the subjects assigned to them were closely interrelated.

3.3 The *delegate of the United States* considered that the subject "Economic and technical impact of implementing a regional satellite network" should be referred to the Technical Cooperation Department of the ITU, so that UNDP could be contacted with a view to ascertaining whether funds could be made available for a feasibility study.

3.4 The *Chairman* said that as the proposal by the delegate of Benin appeared to command no support, it could not be taken up. Neither could the comments by the delegate of the United States be taken into account, for discussion of the matter had been closed at the Committee's previous meeting and could not be reopened at the present stage.

3.5 The *Director of the CCIR* said that he would be happy to provide any information that might be deemed useful on the Handbook which was being prepared by CCIR Study Group 4 on the subject of regional satellite networks.

3.6 The assignment of subjects proposed by the Chairman was *approved*.

4 Statement by the outgoing Chairman of GAS 3

4.1 The *outgoing Chairman of GAS 3* (Mr. Wallenstein, United States of America) made the statement reproduced in Annex A.

4.2 The *delegate of Lebanon*, speaking on behalf of the Committee, thanked Mr. Wallenstein warmly for his outstanding work in GAS 3.

5 Completion of the Committee's work

5.1 The *Chairman* considered that the results achieved by the Committee during its four meetings were far from negligible. In his view, the work of Committees A and B at future Plenary Assemblies would be facilitated if no meetings of Committee D were scheduled for the final week. Finally, he thanked delegations for their cooperation and assistance.

5.2 The *delegate of Lebanon* paid a tribute to the Chairman for his masterly conduct of the Committee's deliberations.

The meeting rose at 11.10 hours.

R. Chapuis
Secretary

M. Ali Belhadj
Chairman

ANNEX A

Statement by the outgoing chairman of GAS 3

Permit me to make a few remarks about my experience with the GAS groups. I was present at the Plenary Assembly of New Delhi in 1960, when the first requests for CCITT Handbooks were formulated by developing countries. It was clearly an expansion of CCITT activities, and some delegations were concerned about this tutorial work. But the first Handbook, on national automatic telephone networks, established the feasibility and usefulness of these publications.

When GAS 3 was created together with four other GAS groups by the Plenary Assembly of 1964, a new concern was voiced. GAS 3 was asked to produce a Handbook for technical and economic comparisons of transmission systems. It was to include all types of transmission, be it over pole lines, cables, VHF and microwave, radio, or satellite circuits. Therefore, GAS 3 had to work across the terms of reference of several Study Groups of both the CCITT and the CCIR.

Some participants in CCITT work asked the question: "Is it appropriate for CCITT (and CCIR, in the case of GAS 3) to become involved in comparative economic studies? Even if it is appropriate, how can it be done without involving competitive contradictions from contributors around the world?" Ladies and gentlemen, the developing countries had formulated the need for this type of Handbook; the CCITT Plenary Assembly had accepted the task and the

CCIR later concurred; therefore, a way had to be found for GAS 3 to respond. And we found a way, under the leadership of our distinguished first Chairman from Morocco. It has been my great opportunity and satisfaction to overcome doubts and uncertainties, with the assistance of some of the best economic study experts in my country as well as of some other countries. Today, some 14 years after this work in GAS 3 was started, our texts of economic studies have survived two new Handbook editions practically unchanged. I believe I can safely say that these basic economic study texts have become classic and model texts in ITU literature.

With regard to the technical content of the GAS 3 Transmission Systems Handbook, let me mention a few changes. For the first edition, published in 1968, only some preliminary information could be included on satellite systems. Since then, requests for more engineering information on satellite systems have been practically continuous, and the subject required much new work in all subsequent study periods. Right now, new uses of satellite systems have led to new editorial activity for additions to our Rural Telecommunications Handbook.

Quite apart from satellite systems, there are new transmission systems using digital techniques and optical fibres as media, which our Handbooks must cover if they are to remain useful. On the other hand, entire families of open-wire carrier and some microwave radio systems are now obsolescent if not obsolete, but they are still included in our Handbook.

What I am trying to illustrate is the need for continuous review and updating of such Handbooks. Only when the CCITT decides to terminate all work in Study Groups XV and XVIII and the CCIR does the same for its Study Groups 4 and 9, for example, could it be said that the work of updating the GAS 3 Handbooks can also be terminated.

There is another point I wish to make. It concerns the editorial responsibility of these Handbooks. Over the years, I have heard it proposed by some that a Handbook could be better and more quickly written if the responsibility were given to one person. Since I have written and published books myself, I have some sympathy for this point of view. However, ladies and gentlemen, a Handbook published under the aegis of ITU must be universal in scope; it should represent the same agreement on sound worldwide engineering practices that is the basis of our Recommendations. My GAS 3 experience proves conclusively that no author is so universally minded that his text can meet agreement by authors from other nations on the first try. Only after repeated exchanges of drafts does a text emerge that can be given to readers around the world, with confidence that it has truth worldwide, not only in one country.

In summary, I say: if there are to be CCITT (and CCIR) Handbooks, then provision should be made for regular updating, expansion and correction. Responsibility should be given to an international group of Study Group stature, to assure fairness and completeness, in the manner of the GAS. Coverage of difficult subjects, such as the first economic comparison study in 1964-1968, may be left to the good sense of the actual Study Group to determine, provided of course that the subject has been previously approved by a Plenary Assembly.

As I look back upon my 16 years of responsible association with GAS 3, I realize how much is due to the initiative and voluntary spirit of qualified people from many countries. The results published in our Handbooks are due to the efforts of these volunteers, and I wish to thank all of them here. Our collaboration in GAS 3 has proven the wisdom of a statement I wish to adapt from a great American writer, Sinclair Lewis. To quote: "Everything that is worthwhile in our work has been created by the free, enquiring and critical spirit, and the preservation of this spirit is more important than any system of procedures and Study Group structure whatsoever."

Ladies and gentlemen, with this thought I bid you farewell as Chairman of GAS 3.

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PART II

RESOLUTIONS ADOPTED AND OPINIONS EXPRESSED BY THE PLENARY ASSEMBLIES

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RESOLUTIONS

RESOLUTION No. 1

Additional rules of procedure of the CCITT¹⁾

(Geneva, 1956; Geneva, 1958; New Delhi, 1960; Geneva, 1964;
Mar del Plata, 1968; Geneva, 1972; Geneva, 1976 and Geneva, 1980)

The CCITT,

in view of

Article 11, including particularly § 5 (No. 79), Articles 58, 68-76 and Chapter XI of the International Telecommunication Convention, Malaga-Torremolinos, 1973;

decides

that as far as the CCITT is concerned, the General Regulations annexed to the Convention of Malaga-Torremolinos, 1973, shall be amplified as follows:

I. Plenary Assembly (PA)

1 a) If the PA meets at the seat of the Union, the precise date of its meeting shall be decided by the Director of the Committee in agreement with the Secretary-General of the Union. If the PA does not meet at the seat of the Union, the exact date of the meeting shall be decided by the inviting government in agreement with the Director of the Committee.

b) The Director of the Committee shall send an invitation to participate in the meeting of the PA to all Members of the Union. If a recognized private operating agency is already a member of the CCITT, the invitation will also be addressed to this recognized private operating agency²⁾. If the PA does not meet at the seat of the Union, the Director shall send the above-mentioned invitation in the name of the inviting government.

c) Members of the CCITT which wish to participate in the meeting are required to advise the Director of the Committee, by letter or telegram, at least a month before the meeting, of the names of the delegates of Administrations and representatives of recognized private operating agencies who will attend meetings of the PA (and especially of the names of the Heads of their delegations). The Director of the CCITT shall forward this information to the Administration of the inviting government, if any.

d) The Director of the CCITT shall invite the Director of the CCIR, the United Nations, the specialized agencies of the United Nations which reciprocally allow representatives of the Union to attend their conferences, and the international organizations and regional telecommunication organizations entitled to participate in the work of the CCITT under Nos. 377 and 378 of the Convention, to attend the PA in an advisory capacity. The United Nations, the specialized agencies and other international and regional telecommunication organizations are required to notify the names of their observers in the same way as specified in § c) for members of the CCITT.

2 a) Before the opening meeting of the PA, the Heads of Delegations shall meet:

i) to prepare the programme of work for the PA, based on proposals by the Director of the CCITT. This shall be submitted to the PA at its first meeting;

ii) to designate the persons who will be proposed as Vice-Chairmen and if necessary (meeting of the PA at the seat of the Union) as Chairman of the meeting of the PA;

iii) to make proposals to the PA for the establishment of the following Committees:

a) "Budget Control Committee"

called upon to examine the "Report on the financial needs of the Committee until the next PA and the expenses incurred by the current PA", in accordance with Nos. 388 and 442 of the International Telecommunication Convention (Malaga-Torremolinos, 1973);

¹⁾ The Editorial Committee of the Plenary Assembly had difficulties in the numeration, presentation and terminology used in the present Resolution and has requested proposals to resolve these problems during the next Plenary Assembly.

²⁾ It should be remembered that in accordance with Nos. 73, 74 and 379 of the Convention, scientific or industrial organizations admitted to participate in an advisory capacity in meetings of the Study Groups (including their final meetings, see § III.10 below) are not invited to the meeting of the Plenary Assembly.

- b) "Committee on the Organization and Working Methods of the CCITT"
called upon to examine the organization and working methods of the CCITT;
- c) "Study Group Work Programme Committee"
called upon on the one hand to consider the Questions proposed for study by the Study Groups (or proposed for further study), decide whether they are suitable for study, check that there is no duplication of Questions referred to different Study Groups, assemble associated Questions and on the other hand submit a report to the PA setting forth the wording of the Questions which it proposes for study and making suggestions for their apportionment among the Study Groups and Working Parties³⁾.

This Work Programme Committee shall be composed of:

- the Chairmen of the Study Groups and Working Parties set up by the PA;
- members of delegations.

It shall submit for approval by the PA a draft programme of Study Group and Working Party meetings for the period up to the following PA;

- d) "Technical Assistance Committee"
called upon to define the policy to be adopted by the PA for dealing with these subjects concerning the planning, establishment and management of national telecommunication networks which are of general interest for all countries Members of the ITU.

It shall make a preliminary examination of the reports on the work of the Special Autonomous Study Groups (GAS). It shall define the guidance to be given for the next study period with a view to the publication of new Handbooks or of new Sections to existing Handbooks. It shall consider the advisability of establishing new GAS.

It shall also propose to the PA any useful provisions concerning the manner of organizing seminars or symposia to be held in conjunction with external meetings of the CCITT (particularly meetings of the Regional Plan Committees) or within the framework of the United Nations Development Programme (UNDP) or the programme of other international organizations;

- e) An "Editorial Committee";
- f) Any other PA Committee which the Heads of Delegations might deem it advisable to set up.

- b) As soon as possible after the opening of the PA, the Heads of Delegations shall meet:
 - i) to consider the proposals of the Committee on the Organization and Working Methods of the CCITT concerning the constitution of Study Groups and Working Parties;
 - ii) to draw up proposals concerning the designation of Chairmen and Vice-Chairmen for Study Groups and such Working Parties as it is required to set up.

3 The PA shall set up the Committees listed in § 2 a) above. On the basis of the proposals of the Committee on the Organization and Working Methods of the CCITT and the assessment of those proposals by the Heads of Delegations, it shall also set up Study Groups and, where appropriate, Working Parties³⁾. It shall designate Study Group Chairmen and Vice-Chairmen and Chairmen and Vice-Chairmen of Working Parties³⁾.

4 a) Recommendations submitted to a vote in the course of a PA shall be considered as adopted if they obtain a majority of votes; the minutes of the PA shall indicate the results of the vote without mentioning the delegations which voted for or against, unless a delegation expressly asks that its vote should be mentioned.

b) Where a Recommendation has been adopted by the Plenary Assembly as a result of a vote that was not unanimous, the Recommendation will refer to the result of the vote in the form: "The CCITT issues Recommendation ... by a majority (by ... votes to ..., with ... abstentions)."

c) When a country is not represented by an Administration, the representatives of the recognized private operating agencies of that country shall, as a whole, regardless of their number, be entitled to a single vote.

5 On the proposal of the Study Group Work Programme Committee, the PA shall:

- a) prepare the list and text of Questions requiring study or further study up to the following PA;
- b) allocate these Questions to Study Groups and Working Parties³⁾;
- c) decide, when a Question is of interest to several Study Groups, whether:
 - to set up a Joint Working Party composed of members of the Study Groups concerned, or
 - to entrust the study to a single Study Group, the necessary coordination being effected within the framework of national organizations;

³⁾ This term does not apply to the Working Parties created by the Study Groups in the process of organizing their work.

- d) set up coordination groups for each family of Study Groups; these groups shall be composed of the Chairmen and Vice-Chairmen of the Study Groups in the family concerned and shall carry out the necessary coordination for studies that are common to the Study Groups in the family;
- e) draw up, in general outline at least, a programme for the meetings to be held by Study Groups and Working Parties set up by the Assembly until such time as the Plenary Assembly meets again.

6 The Plenary Assembly should be organized so as to enable it to devote adequate time to the important administrative and organizational aspects of the CCITT for the ensuing Plenary period. As a general rule, the following sequence is recommended:

a) The Plenary Assembly shall examine reports from Study Groups and the Director of the CCITT, on activities in the previous Study Period, deal with the approval of Recommendations and note the lists of Questions appearing in these reports.

While the PA is in session, Study Group Chairmen shall hold themselves at the disposal of the PA, to supply information on matters which concern their Study Groups.

Simultaneously, the Budget Control Committee shall meet to approve the budget of the current Plenary Assembly, and prepare a report proposing that the Plenary Assembly approve an estimate of the financial needs of the CCITT until the next Plenary Assembly, to be submitted later on to the Administrative Council of the ITU, as provided for in No. 388 of the International Telecommunication Convention.

b) The Committee on the Organization and Working Methods of the CCITT should meet and prepare organizational proposals (see § I.4).

c) The Technical Assistance Committee should meet at the same time.

d) Heads of Delegations should meet [see § I.2 b) of the Resolution].

e) The Plenary Assembly should elect Chairmen and Vice-Chairmen for the new Study Period.

f) The Work Programme Committee should meet and develop a draft programme of work [see § I.2a) iii) c) of the Resolution].

g) The Plenary Assembly should receive and consider the reports of the Plenary Committees, and make final decisions on the recommendations submitted to it.

II. *The Director*

1 The Director of the CCITT is empowered to enter into direct contact with the Chairmen and Rapporteurs of the Study Groups and Working Parties.

2 In order that the Director and his assistants may keep up to date on technical progress, Administrations and private operating agencies (as far as circumstances permit) may authorize him to visit their installations and to obtain all necessary information; the expenses incurred in this connection are chargeable to the CCITT.

3 The Director shall take all the necessary preparatory measures for meetings of the PA, Study Groups and Working Parties, the work of which he should coordinate in such a way that the meetings will produce the best results in the shortest possible time. To this end he may decide, with the agreement of the Chairmen of Study Groups or Working Parties, in the same way as the Plenary Assembly, to set up Working Parties attached to one Study Group or Joint Working Parties concerning several Study Groups for the purpose of studying a Question or group of Questions. He shall fix, by agreement with the Chairmen, the dates and programmes of Study Group and Working Party meetings; he groups these meetings in time according to the nature of the work and the availability of the CCITT Secretariat.

4 a) In his "Report on the financial needs of the Committee until the next PA", the Director shall communicate to the PA (for information) a summary of the accounts for the years which have elapsed since the preceding PA and the "Estimated Expenses of the CCITT" to cover the financial requirements of the Committee until the next PA.

b) These "Estimated Expenses of the CCITT" shall first be submitted to a preliminary examination by the Budget Control Committee; the Chairman of this Committee shall prepare a report on this subject for the PA. After approval, these "Estimated Expenses of the CCITT" shall be sent by the Director of the CCITT to the Secretary-General of the Union, for submission to the Administrative Council.

c) After the PA, the Director shall supply the Secretary-General of the Union (for the information of the ITU Administrative Council) with a list of Study Group meetings scheduled up to the time of the next Plenary Assembly, and with an estimate of the probable costs of those Study Group meetings.

d) The Director of the CCITT shall submit, for a preliminary examination by the Budget Control Committee and thereafter for approval by the PA, the accounts for expenditure incurred for the current PA.

5 The Director shall submit to the PA a summary report on the proposals he has received concerning the organization, terms of reference and work programme of Study Groups and Working Parties for the next study period; he may give his views on these proposals if he so desires.

In addition, the Director may, within the limitations of the Regulations of the Union, submit to the PA any report or proposal which he considers would help to improve the work of the CCITT, so that the PA may decide what action to take. In particular, the Director shall submit to the Plenary Assembly such proposals concerning the organization and terms of reference of the Study Groups for the succeeding Plenary Period as he may consider necessary.

6 After a meeting of the PA, the Director shall supply a list of the Study Groups and Working Parties set up by the Plenary Assembly to the Administrations of Members of the Union, recognized private operating agencies and scientific or industrial organizations taking part in the Consultative Committee's activities, with an indication of the Questions referred to Study Groups and Working Parties for study. He shall ask them to say what Study Groups and Working Parties they wish to take part in, and to supply the names of participants (delegates, representatives and experts) appointed to represent them.

Furthermore, he shall supply a list of Study Groups and Working Parties, as drawn up by the Plenary Assembly, to the international organizations, and ask them which Study Groups and Working Parties they wish to be represented in as observers.

Administrations and other participating organizations are urgently requested to supply these particulars after each Plenary Assembly, not later than two months after they have received the circular of the Director of the CCITT, and to update them regularly.

7 In the interval between Plenary Assemblies, when circumstances demand it, the Director is authorized to take exceptional measures to maintain the efficiency of work of the CCITT within his financial authority.

III. *Study Groups and Working Parties*

1 *Classification of Study Groups*

a) Study Groups shall be classified as normal Study Groups, Joint CCITT-CCIR Study Groups, and Special Autonomous Study Groups.

b) A Joint Study Group, set up with the approval of the Plenary Assemblies of both CCIs, shall submit draft Recommendations to the first PA to meet after the draft Recommendation has been drawn up; the draft Recommendation in question would then be provisionally approved by this Plenary Assembly, pending approval by the Plenary Assembly of the other CCI.

One of the CCIs shall be responsible for the management of a Joint Study Group. The CCI concerned will appoint the Chairman, while the other CCI will appoint the Vice-Chairman.

c) Special Autonomous Study Groups are Study Groups established by, and reporting directly to, Plenary Assemblies which are concerned with those studies carried out by the CCITT in regard to the developing countries in accordance with Nos. 12, 13, 16, 18, 19, 21, 54 and 309 of the Convention (Malaga-Torremolinos, 1973).

d) A Joint Working Party, set up with the approval of the Plenary Assembly shall submit draft Recommendations to the controlling Study Group which will be designated by the Plenary Assembly establishing it.

e) A Regional Group can be established for the purpose of dealing with Questions and studies of particular interest to a group of countries and Administrations in an ITU region (e.g. TAF).

2 *Registration of participants*

a) The Administrations, recognized private operating agencies and scientific or industrial organizations, shall be represented, in the Study Groups and Working Parties in whose work they wish to take part, by participants, appointed by name and chosen by them as experts qualified to collaborate in the search for technically and economically satisfactory solutions to the Questions under study. However, exceptionally, registration with a Study Group, or Working Party, may be made without specifying the name of the participants concerned. International organizations shall give the names of their prospective observers.

b) To study Questions of common interest to the CCITT and the CCIR, Administrations, recognized private operating agencies and scientific or industrial organizations may also appoint participants from the CCIR to a Study Group of the CCITT; such an appointment does not carry with it the obligation to share in the expenses of the CCITT.

3 *Form of submission of contributions*

a) The Administrations, the recognized private operating agencies, the scientific or industrial organizations and international organizations registered with a Study Group or Working Party, Chairmen and participants shall send their contributions, relating to the studies being made, to the Director of the CCITT.

- b) These contributions shall contain comments, results of experiments or proposals designed to further the studies to which they relate.
- c) Contributions should be presented in accordance with the following general directives:
 - i) Contributions should be concisely drafted, avoiding any unnecessary details, tables or statistics that make no direct contribution to the study of a Question. They should be clearly written with a view to being universally understood, that is, as codified as possible, using international terminology and avoiding the technical jargon peculiar to the author's country. When a contribution deals with several Questions, the Questions should be separated so that the text of each Question begins on a fresh sheet of paper (not on the back of a page).
 - ii) A contribution should not as a general rule exceed about 2 500 words (five pages), nor include more than three pages of figures (making eight pages in all). The contribution should be accompanied by a summary and should be followed by conclusions whenever possible.
For draft Recommendations and for contributions submitted by Special Rapporteurs, the above directives should not apply.
 - iii) Documents of purely theoretical interest which are not directly related to the Questions under study should not be submitted in their entirety. Short abstracts only of such articles could be sent to the CCITT for translation and publication.
 - iv) Articles which have been or will be published in the technical press should not be submitted to the CCITT. Short abstracts only of such articles could, however, be sent to the CCITT for translation and publication.
 - v) Passages of an unduly commercial nature included in a contribution may be deleted by the Director of the CCITT in agreement with the Chairman; the author of the contribution will be advised of any such deletions.
- d) Contributions should be drafted in one (or more) of the working languages of the Union and three copies sent to the CCITT Secretariat, with further copies to be sent by contributors direct to the Chairman and Vice-Chairmen of the Study Group and to the relevant Chairmen of the Working Parties and Special Rapporteurs.

It is recommended that a translation of contributions in another working language be sent to the CCITT Secretariat.

Contributions should be submitted on very white paper of A4 format, in clear black type. If the paper is not of A4 format, the text on each page should not exceed that format. The top half of the first page should be left blank.

- e) Documents which are to be studied by a Study Group or a Working Party meeting should reach the Director of the CCITT at least three months before the date fixed for the opening of the meeting concerned.

4 *Processing of contributions*

a) Contributions received at least three months before a meeting should be published in the normal way. That is, as far as possible, the Director shall group the documents received Question by Question, shall have the necessary translations made and shall send them to the members of Study Groups concerned, in the working language they desire, one month before the date laid down for the opening of the Study Group or Working Party meeting having the Question concerned on its agenda.

b) If a Chairman, in agreement with the members of his Study Group or his Working Party, states that his Study Group (or Working Party) is willing to use documents in the original working language, the Director shall send on the documents regrouped as specified in §4 a) above, without having them translated. This procedure cannot be changed during the period between two Plenary Assemblies.

c) Contributions received by the Director less than three months before the date fixed for the opening of a meeting cannot as a general rule be dealt with in accordance with the procedure outlined under §§4 a) and 7 a).

d) Exceptionally, when an Administration has failed to observe this time limit, it should advise the CCITT Secretariat about the forthcoming late contribution and its contents and should, where practicable, prepare a translation into another of the Union's three working languages and send it to the CCITT Secretariat at the same time as the copies in the original language. The CCITT Secretariat will take all possible steps, with due regard to the work of the Common Services of the ITU General Secretariat, to ensure that contributions received at the latest between two and three months before the beginning of a meeting, are reproduced in offset in the languages received (without further translation) and distributed in good time to all the participants registered for the Study Group concerned.

e) Contributions received less than two months before a meeting shall be published as "delayed contributions", in the form in which they are received, in their original language only and (where applicable) in the second language into which they have been translated by the submitter; they shall be distributed at the beginning of the meeting solely to the participants present. As far as possible an Administration should advise the CCITT Secretariat about any forthcoming "delayed contribution" and its content not less than two months before the meeting and the Secretariat will issue a list of delayed contributions and contents not later than six weeks before the meeting. It should be for the Study Group as a whole to accept or reject discussion of such delayed contributions.

f) The Director of the CCITT should endeavour to persuade Administrations to follow the rules already established for the presentation, form, and timing of documents as laid down in § III.3. A reminder circular from the Director should be issued whenever appropriate.

g) The Director of the CCITT, after consulting the Study Group Chairman, may return to the contributor a document which does not comply with the general directives of § III.3 of this Resolution for it to be brought in line with those directives.

h) The CCITT Secretariat shall not reissue these delayed contributions as White Documents, unless otherwise decided by the Chairman of the Study Group or Working Party after consultation, where appropriate, with his Group (or Working Party), and then only in exceptional cases of special interest and importance.

i) Some contributions of general (and not merely incidental) interest which may, for example, be of some scientific importance (measurement results), although received too late to be distributed before a meeting and accordingly issued as delayed contributions, might exceptionally be distributed later as contributions.

j) Any contribution should, as far as possible, be submitted to a single Study Group. If, however, an Administration submits a contribution which it believes is of interest to several Study Groups, it should identify the Study Group of primary importance and other interested Study Groups. The contribution will be issued in full to the Study Group of primary interest, and a single sheet giving the title of the contribution, its source and the summary of its contents [see § III.3 c)] to the other Study Groups. This single sheet will be numbered in the series of contributions of each Study Group to which it is issued.

5 *Frequency of meetings*

a) Study Groups and Working Parties shall meet in principle once in the period of time between the end of a PA and the meetings mentioned in § 5 d) below. Exceptionally, extra meetings may be held, with the approval of the Director of the CCITT and the agreement of a majority of the Administrations registered with the Study Group or Working Party concerned.

b) Meetings of Study Groups with common interests or dealing with problems possessing certain affinities should, if possible, be arranged so as to enable Administrations to send one delegate or representative to cover several meetings. As far as possible, the arrangement chosen should enable the Study Groups meeting during the period to communicate any information they may need to one another without delay. Furthermore, it should enable specialists from all over the world in the same disciplines or related or complementary disciplines to have direct contacts with each other to the benefit of the participants themselves and of their Administrations. At the same time it should not entail repeated absences of those specialists from their countries.

c) The timetable of meetings will be prepared and brought to the knowledge of Administrations well in advance (one year) to give the latter time to study problems and submit contributions within the prescribed time-limits and to give the CCITT Secretariat the time to distribute those contributions. In this way the Chairmen of Study Groups and the delegates can so organize their work as to consider the contributions in advance, which will help to enhance the efficiency of meetings and cut down their length.

d) The final meetings of Study Groups towards the close of each study period shall end not later than three months before the beginning of the Plenary Assembly to enable the preparation of full and homogeneous final reports and to give the delegates to the Plenary Assembly an opportunity to study them fully.

e) The schedule of final meetings of Study Groups to meet the object stated in § 10 below shall be adjusted in the light of circumstances by the Director of the CCITT in cooperation with the Chairman of the Study Group in question.

f) The Director will advise all Administrations and RPOAs as to the dates of the final meetings of Study Groups by Circular-letter at least three months beforehand, in order that, among other things, the Administrations and RPOAs may submit draft Questions proposed for study in the following Plenary period in accordance with Opinion No. 3.

6 *Invitations*

a) In accordance with Opinion No. 1, Study Groups may meet outside Geneva if invited to do so by Administrations or recognized private operating agencies of countries Members of the Union. Such invitations must be submitted to the Plenary Assembly and accepted by it, and shall be taken up only if they are compatible with the credits allocated to the CCITT by the Administrative Council.

b) The only invitations which the Director is authorized to accept without such action by the Plenary Assembly are those extended to Working Parties. They may be accepted only if the Chairmen concerned are in agreement and if the budgetary resources of the CCITT permit.

c) Invitations mentioned in a) and b) above shall be issued and accepted, and meetings outside Geneva subsequently arranged only if conditions provided for in ITU Administrative Council Decision No. 304, of April 1963, can be met.

d) Should an invitation be cancelled for any reason between Plenary Assemblies, a proposal shall be made to Administrations that the meeting be convened in Geneva, in principle on the date originally planned.

7 *Preparation of work and meetings*

a) At the beginning of each study period a draft organization and an action plan for the study period should be prepared by each Chairman with the help of the CCITT Secretariat. It should take into account any priorities and needs for coordination which had been allocated by the Plenary Assembly.

How the proposed action plan develops will depend upon the contributions received from the members of the CCITT and views expressed by participants on the meetings.

b) Before each meeting, a draft working plan listing the Questions to be examined and the subject of each of them should be prepared by the Chairman, with the help of the Secretariat. This working plan should indicate the point reached in the study of each Question and the documents relating to it.

The working plan should indicate which Questions are to be studied on each day, but it must be regarded as subject to change in the light of the rate at which work proceeds. Chairmen shall try to follow it as far as possible.

The working plan will be sent out at least one month before the beginning of each meeting.

c) If there are insufficient contributions, no meeting at all should be scheduled. The decision whether to cancel a meeting or not will be taken by the Director of the CCITT.

d) If, from the contributions received, it appears that there is agreement among Administrations on the lines of the reply to a Question (or part of a Question) the Chairman, with the assistance of the Secretariat, may submit a draft reply, possibly accompanied by a draft Recommendation.

e) If the contributions received reveal a variety of proposals or points of view, the Secretariat should, if possible, prepare a table summing up the different positions of Administrations on the Question and the point reached in the study. The table should be sent to members of the Study Group, if possible in advance of the meeting.

8 *Conduct of meetings*

a) The Chairman shall direct the debates during the meeting, with the assistance of the Secretariat.

b) The Chairman is authorized to decide that there shall be no discussion on Questions on which an insufficient number of contributions are received.

c) Questions which have not elicited any contribution should not be placed on the agenda of meetings and at the end of the study period should be deleted from the list of Questions.

d) Study Groups and Working Parties may set up *working teams* (which should be as small as possible) during their meetings, to study Questions allocated to those particular Study Groups and Working Parties.

e) A Study Group may entrust a Question or group of Questions to an *Ad Hoc* Working Party for preliminary study. It may, by agreement with another Study Group (or, if necessary, with other Study Groups) entrust an *Ad Hoc* Joint Working Party with the study of a Question or group of Questions which may be of common interest to the Study Groups concerned. One of these Study Groups, known as the Controlling Study Group, shall have the final responsibility for the study. The contributions used as a basis for discussions by the *Ad Hoc* Joint Working Party will be sent solely to the members registered in the *Ad Hoc* Joint Working Party; final reports only of these *Ad Hoc* Joint Working Parties shall be sent to all the members of the Study Groups concerned.

f) Working Parties or sub-Working Parties should be set up by Study Groups only after thorough consideration of the Questions and only if a Question or group of Questions with points in common cannot be settled otherwise than by specialists. Proliferation of Working Parties and sub-groups must be avoided as far as possible.

g) The study of Questions by correspondence should be encouraged as far as practicable at least during the early stages of their study. For this purpose, a Study Group or Working Party may instruct a Special Rapporteur, appointed in person by the Study Group or Working Party, to work alone or in collaboration with others, to make a preliminary analysis of the more complex Questions and/or to draft a reply to a Question for submission to the Study Group or Working Party.

When the Special Rapporteur works with a group of collaborators, he shall choose whatever method of work is considered most appropriate: correspondence or meetings of the group.

The Special Rapporteur would then submit a report to the Study Group or Working Party for examination at the next meeting. (For further details of the working methods for Special Rapporteurs, see Annex 1 to this Resolution.)

h) A Study Group or a Working Party may decide that a meeting is limited wholly, or in part, to participants of Administrations and recognized private operating agencies for definition, see Annex 2, page 135 of the Convention (Malaga-Torremolinos, 1973).

9 *Preparation of reports, Recommendations and new Questions*

a) A report on the work done during a meeting shall be prepared by the Secretariat of the CCITT. This report should contain in condensed form the results of the meeting and the agreements reached and should identify the points left to the next meeting for further study. The number of Annexes to the report should be restricted to an indispensable minimum by making cross-references to contributions, existing reports, etc., and by referring to material which exists in the documentation of a Study Group.

To assist the CCITT Secretariat in this task, the Study Group or Working Party may arrange for some delegates to draft certain elements of the report. The Secretariat should coordinate this drafting work sufficiently to dispense with the need for Editing Groups (as distinct from Drafting Groups) during the meetings. To this end, and as a general rule, Drafting Groups might be established at each meeting which would be responsible for drafting a summary of the reasons that lead to the decisions by the Study Group or Working Party.

This report shall be submitted, if possible, for approval before the end of the meeting; otherwise it shall be submitted for approval by the Chairman of the meeting, unless the meeting declares itself satisfied by approval of the texts in accordance with § 9 b) below.

Any meeting, even if informal, of a Working Party or small group operating in the CCITT shall give rise to a report, drawn up, in the absence of a representative of the CCITT Secretariat, under the responsibility of the Chairman of the Group. Such report shall be sent to the CCITT Secretariat, which shall circulate it, in the form of a White Document, to all registered members of the Study Group in question.

b) The drafts of Recommendations and Resolutions shall be prepared by the Chairman, whenever possible with the assistance of the Specialized Secretariat or temporary working teams. These texts must be approved in their final form before the meeting disbands.

c) The accelerated procedure for provisional adoption of Recommendations might be used more frequently (see Resolution No. 2).

d) New draft Recommendations should not be submitted for approval by the Plenary Assembly as long as the texts are of a provisional nature. Nevertheless certain clauses of new draft Recommendations could be provisionally adopted by the Plenary Assembly.

e) Administrations and recognized private operating agencies are authorized to communicate Study Group or Working Party reports and documents to any experts they consider it expedient to consult, except where the Study Group or the Working Party concerned has specifically decided that its report, or a document, is to be treated as confidential.

f) The Chairmen are requested to apply more stringently the criteria of CCITT Opinion No. 3 on the preliminary examination of new draft Questions. Towards the close of each study period the attention of Study Groups should be drawn to this Opinion so that they may apply the criteria it contains when preparing proposed new Questions.

g) The report of the Study Group meeting should include a list showing all the Special Rapporteurs that have been appointed (or reappointed) and their terms of reference.

10 *Final meetings of Study Groups*

a) All Study Groups shall meet sufficiently in advance of the Plenary Assembly to allow the final report of each Study Group to reach Administrations at least one month before the Plenary Assembly [see also §§ III. 5 d) to 5 f)].

b) On conclusion of the study of each Question the Study Groups could appoint one or two members to prepare a text summing up the final results of the work. This document would be designed to aid the Chairman and the CCITT Secretariat in establishing the final report.

c) The final report shall be the document forwarded to the Plenary Assembly.

d) The final report of each Study Group is the responsibility of the Study Group Chairman, and shall include:

- a short and comprehensive summary of the results achieved in the study period, in particular which new and amended draft Recommendations have been prepared identifying the scope, the application and the importance of these draft Recommendations;
- the final text of new draft Recommendations and of draft amendments to existing Recommendations;
- the text of provisional Recommendations to be adopted by the Plenary Assembly (these will have had approval by correspondence during the study period under Resolution No. 2);
- a summary report on the status of Questions, the study of which has not concluded, and new Questions the reasons for which are given as required in Opinion 3;
- the list of Questions proposed to the Plenary Assembly for the following Plenary period.

ANNEX 1

(to CCITT Resolution No. 1)

Special Rapporteurs

In Resolution No. 1, Part III. 8 g) it is stated that some studies may be entrusted to a Special Rapporteur.

According to the second paragraph of Part III. 8 g) full discretion is given to a group of collaborators chaired by a rapporteur whenever such a method of working is adopted.

However, the following indications may give a clearer idea of this method of working.

In one method, a single Special Rapporteur may be designated to analyze the contents of normally distributed contributions and to draw up a report, which is itself presented as a contribution, giving the results of his analysis.

In another method, a Special Rapporteur is appointed for the study of a single Question requiring detailed consideration before decisions can be taken on it. The Special Rapporteur works primarily by correspondence with any other collaborators interested in the preliminary study of the Question. Any Administration submitting contributions on the matter in question does so directly to the Special Rapporteur (with a copy, if so desired, to the CCITT Secretariat). The CCITT Secretariat and, through it, the ITU Common Services are at the disposal of the Special Rapporteur for the translation and distribution of any document. However, the distribution of this preliminary documentation is limited to the members of the group collaborating with the Special Rapporteur. There often comes a time when the study cannot progress further by correspondence alone; in that case the Special Rapporteur may call a private meeting of his collaborators whenever he wishes.

When his work and that of the group is completed or cannot progress any further, the Special Rapporteur prepares a document for submission to the Study Group responsible for study of the Question. This document which constitutes the report of the Special Rapporteur, may include a draft Recommendation, if it is possible to formulate one or, when the views expressed are too numerous and too divergent, a summary of the observations made, in which case responsibility for further study of the Question reverts to the Study Group.

RESOLUTION No. 2

Accelerated procedure for the provisional approval of Recommendations

(*Mar del Plata, 1968; Geneva, 1972; Geneva, 1976; Geneva, 1980*)

The CCITT,

decides that

(1) A Study Group meeting may decide that the following procedure for provisional approval be applied to a draft Recommendation. Such a decision shall be taken by unanimous agreement between the Administrations and recognized private operating agencies represented at the meeting of the Study Group.

(2) As soon as possible after the relevant meeting, the CCITT Secretariat shall request the Administrations of countries Members of the ITU to inform it within three months whether they approve the provisional adoption of the draft Recommendation concerned. The Secretariat shall also advise RPOAs that Administrations are being asked to indicate their approval of this provisional adoption. The Recommendation shall be provisionally adopted if, within this time-limit, a simple majority is in favour, provided that more than half of the ITU Members represented at the meeting of the Study Group which proposed the application of Resolution No. 2 had, in fact, replied. Where the RPOAs of an ITU Member were the Members at the Study Group meeting, the vote shall be in accordance with No. 396 of the ITU Convention of Malaga-Torremolinos, 1973. In all cases consultation should be conducted in the most effective manner.

(3) Definitive adoption of the Recommendation will be a matter for the following Plenary Assembly.

RESOLUTION No. 3**Participation in CCITT activities
Communications submitted to Plan Committees,
symposia and seminars***(Geneva, 1964; Mar del Plata, 1968; Geneva, 1972; Geneva, 1976)*

The CCITT,

noting

Administrative Council Resolution No. 402

emphasizes the advantage

for countries Members of the ITU of participating in CCITT activities by sending suitable delegations for continuing participation in Study Groups, Working Parties and Plan Committees;

decides

that certain technical papers submitted to the Plan Committees and to symposia organized on the occasion of Study Group meetings should be widely disseminated;

further decides

that the CCITT should organize seminars periodically which might give a general view of the CCITT organization and examine in detail selected subjects of general interest.

RESOLUTION No. 4**Publication of CCITT Books***(Geneva, 1958; New Delhi, 1960; Geneva, 1964;
Mar del Plata, 1968; Geneva, 1972; Geneva, 1976; Geneva, 1980)*

The CCITT,

decides that

(1) The CCITT Book shall be published in separate volumes and fascicles according to the following plan:

- a) *Volume I* – Minutes and reports of the Plenary Assembly.
Opinions and Resolutions.
Recommendations on:
 - the organization and working procedures of the CCITT (Series A);
 - means of expression (Series B);
 - general telecommunication statistics (Series C);
 List of Study Groups and Questions under study.
- b) *Volume II* – (Divided into 4 fascicles, sold separately)
 - II.1 – General tariff principles – Charging and accounting in international telecommunications services. (Series D Recommendations)
 - II.2 – International telephone service – Operation. (Recommendations E.100-E.323)
 - II.3 – International telephone service. Network management – traffic engineering. (Recommendations E.401-E.543)
 - II.4 – Telegraph and “telematic services”¹⁾ operations and tariffs. (Series F Recommendations)
- c) *Volume III* – (Divided into 4 fascicles, sold separately).
 - III.1 – General characteristics of international telephone connections and circuits. (Recommendations G.101-G.171)
 - III.2 – International analogue carrier systems. Transmission media – characteristics. (Recommendations G.211-G.651)
 - III.3 – Digital networks – transmission systems and multiplexing equipments. (Recommendations G.701-G.941)
 - III.4 – Line transmission of non-telephone signals. Transmission of sound programme and television signals. (Series H, J Recommendations)

¹⁾ “Telematic services” is used provisionally.

- d) *Volume IV* – (Divided into 4 fascicles, sold separately).
 - IV.1 – Maintenance; general principles, international carrier systems, international telephone circuits. (Recommendations M.10-M.761)
 - IV.2 – Maintenance; international voice frequency telegraphy and facsimile, international leased circuits. (Recommendations M.800-M.1235)
 - IV.3 – Maintenance; international sound programme and television transmission circuits. (Series N Recommendations)
 - IV.4 – Specifications of measuring equipment. (Series O Recommendations)
- e) *Volume V* – (One fascicle, sold separately).
 - Telephone transmission quality. (Series P Recommendations)
- f) *Volume VI* – (Divided into 8 fascicles, sold separately).
 - VI.1 – General Recommendations on telephone switching and signalling. Interface with the maritime service. (Recommendations Q.1-Q.118 bis)
 - VI.2 – Specifications of signalling systems Nos. 4 and 5. (Recommendations Q.120-Q.180)
 - VI.3 – Specifications of signalling system No. 6. (Recommendations Q.251-Q.300)
 - VI.4 – Specifications of signalling systems R1 and R2. (Recommendations Q.310-Q.490)
 - VI.5 – Digital transit exchanges for national and international applications. Interworking of signalling systems. (Recommendations Q.501-Q.685)
 - VI.6 – Specifications of signalling system No. 7. (Recommendations Q.701-Q.741)
 - VI.7 – Functional Specification and Description Language (SDL). Man-machine language (MML). (Recommendations Z.101-Z.104, Z.311-Z.341)
 - VI.8 – CCITT high level language (CHILL). (Recommendation Z.200)
- g) *Volume VII* – (Divided into 2 fascicles, sold separately).
 - VII.1 – Telegraph transmission and switching. (Series R, U Recommendations)
 - VII.2 – Telegraph and “telematic services”²⁾ terminal equipment. (Series S, T Recommendations)
- h) *Volume VIII* – (Divided into 3 fascicles, sold separately).
 - VIII.1 – Data communication over the telephone network. (Series V Recommendations)
 - VIII.2 – Data communication networks; services and facilities, interfaces. (Recommendations X.1-X.29)
 - VIII.3 – Data communication networks; transmission, signalling and switching network aspects, maintenance, administrative arrangements. (Recommendations X.40-X.180)
- i) *Volume IX* – (One fascicle, sold separately).
 - Protection against interference. (Series K Recommendations.) Protection of cable sheaths and poles. (Series L Recommendations)
- j) *Volume X* – (Divided into 2 fascicles, sold separately).
 - X.1 – Terms and definitions
 - X.2 – Index of the Yellow Book

(2) Except for Volume I, each volume or fascicle sold separately will contain, on its topic area:

- the texts of the Recommendations (in principle, worldwide in scope, or in particular cases, of a regional nature);
- the text of the supplements of a documentary nature, adopted by the Study Groups, which cannot be published as ordinary contributions. There should only be a few of these supplements and, texts of this kind, which are already included in preceding books, will not be published.

Each volume may also contain definitions of the technical terms used in the Recommendations.

(3) The text of the Questions and their annexes will be published as low-cost but durable editions for issue to the Members of the Study Group concerned (Contribution No. 1 in a plastic binding) and a sufficient number of copies with the same colour of cover as the CCITT Book will be available for sale separately to meet demand.

(4) Each volume or fascicle will be published in an A4 format, bound with a yellow cover.

²⁾ “Telematic services” is used provisionally.

(5) Other publications, not contained in the Books, such as:

- the Manuals of the Special Autonomous Study Groups;
- the general Plans for the development of the international network;
- the *Directives concerning the protection of telecommunication lines against harmful effects from electricity lines*;
- *Recommendations concerning the construction, installation and protection of telecommunication cables in public networks*;
- *Instructions for the international telephone service*;
- *Instructions for the operation of the international public telegram service*;
- *Instructions for the telex service*;
- the various booklets whose publication is requested by a Plenary Assembly,

will be published and re-edited, when necessary, independently of the volumes of the Book.

(6) Publications issued in loose-leaf form and which require periodical updating should, in principle, be amended by issuing new pages.

RESOLUTION No. 5

Numbering and lay-out of CCITT Recommendations

(Geneva, 1958; New Delhi, 1960; Geneva, 1964;
Geneva, 1972; Geneva, 1976; Geneva, 1980)

The CCITT,

decides that

(1) All CCITT Recommendations shall be numbered; the number of each Recommendation shall have a letter prefix referring to the series, as well as a reference number.

(2) The series of Recommendations shall be as follows:

Reference letter of the series	Scope of the series	Volume in which the Recommendation will be published
A	Organizations of the work of the CCITT	I
B	Means of expression (definitions, vocabulary, symbols, classification)	I
C	General telecommunications statistics	I
D	General Tariff Principles	II.1
E	Telephone operation, network management and traffic engineering	II.2, II.3
F	Telegraph operation and tariffs	II.4
G	Transmission: lines, radio-relay systems, radiotelephone circuits	III.1, III.2, III.3
H	Utilization of lines for telegraphy and phototelegraphy	III.4
J	Radio and television programme transmissions	III.4
K	Protection against interference	IX.1
L	Protection against corrosion	IX.1
M	Maintenance of telephone circuits and carrier systems	IV.1, IV.2
N	Maintenance for sound-programme and television transmissions	IV.3
O	Specification of measuring equipment	IV.4
P	Telephone transmission quality. Telephone installations and local line networks	V.1
Q	Telephone switching and signalling	VI.1 to VI.6
R	Telegraph channels	VII.1
S	Alphabetical telegraph apparatus	VII.2
T	Facsimile telegraph apparatus	VII.2
U	Telegraph switching	VII.1
V	Data transmission	VIII.1
X	New data networks	VIII.2, VIII.3
Z	Programming languages for SPC exchanges	VI.7, VI.8

(3) Recommendations in each series shall be classified in sections according to subject.

(4) The operative part of a Recommendation shall be preceded by a statement of the reasons that have led to the issue of the Recommendation. This will be worded, as far as possible, in an informative way, omitting the formula "considering".

RESOLUTION No. 8

Cooperation with the IEC on the standardization of cables, wires, optical fibres and waveguides

(New Delhi, 1960; Geneva, 1964; Mar del Plata, 1968; Geneva, 1976; Geneva, 1980)

The CCITT,

considering

(a) that the International Electrotechnical Commission has set up a Technical Committee (TC 46) to prepare international standards on cables, wires, optical fibres, waveguides and accessories intended for use in telecommunication equipment and in devices employing similar techniques;

(b) that the cables with metallic conductors and optical fibres and waveguides intended for use in public telecommunication networks are not included in the scope of this Committee, with the exception of polyolefin insulated LF cables for outdoor use covered by the revised scope for IEC TC 46 proposed at its meeting in October 1976;

(c) that other points of the scope of this Committee have not been narrowly defined and that its work in this respect should be coordinated with that of the CCITT;

(d) that telecommunication Administrations reserve the right to establish some of the specifications for wires, optical fibres and cables whenever they consider it advisable;

instructs

the Director of the CCITT to take any useful measures to ensure efficient liaison between the CCITT and IEC TC 46 in accordance with the principles given in the Annex below;

recommends

to Member Administrations of the CCITT whose countries participate in the work of the IEC to take an active part – each within the National Committee of the IEC – in work connected with the activities of IEC TC 46, so that the views of telecommunication Administrations may be duly taken into account.

ANNEX A

(to Resolution No. 8)

Principles of cooperation between the CCITT and IEC Technical Committee 46

A.1 The aim of the standardization envisaged by the IEC is to cut down the number of types of cables to be made, so that the price may be lowered and so that the cables made by different manufacturers will be interchangeable. This policy is analogous to that followed by the CCITT as regards those types of cables for which it alone is competent. The IEC can study the standardization of internal cabling for use for various purposes in electronics, including telecommunications, polyolefin insulated low frequency cables for outdoor use covered by the revised scope for IEC TC 46 proposed at its meeting in October 1976 and cables containing optical fibres not intended for use in public telecommunication networks. Nevertheless, if cables, wires or optical fibres standardized by the IEC can be used in telecommunication installations, they must not conflict with CCITT Recommendations concerning those installations. In particular it is important that the characteristics of the cables are compatible with CCITT Recommendations on transmission screening and protection drawn up by relevant Study Groups.

A.2 It therefore seems very desirable for the draft standards studied by TC 46 to be forwarded to the CCITT for examination. To simplify cooperation, the result of this examination should preferably be expressed in one of the following forms:

- (a) the CCITT has no comment to make on this draft, or
- (b) draft standard... should be brought into line with CCITT Recommendation..., or
- (c) the CCITT is at present studying the point dealt with in draft standard..., which it considers as being within its terms of reference.

As a general rule, this examination should be carried out by the appropriate CCITT Study Group but, since IEC procedure involves time-limits that may not be exceeded (and which are sometimes rather short), the Plenary Assembly leaves it to the Director to take any appropriate practical measures.

A.3 The Director of the CCITT will continue to supply the IEC with any useful documentation regarding CCITT work and to send observers to the meetings of TC 46 and its subcommittees studying the problems which are of interest to the CCITT.

RESOLUTION No. 9

Work of the ITU in the field of space communications

(Mar del Plata, 1968; Geneva, 1972; Geneva, 1976)

The CCITT,

aware

of the important and urgent problems raised by the integration of space communications within existing systems, which will continue to develop;

considering

(a) that the ITU and its organs are the sole bodies within the United Nations system qualified to issue recommendations relating to such integration;

(b) that the Administrative Council of the ITU has adopted Resolutions Nos. 636 and 637 connecting the role and the activities of the ITU in the field of space communications;

decides

to request the Director of the CCITT, in cooperation with the Director of the CCIR and in accordance with the duties of their office as defined in Article 11, Nos. 70, 71 and Article 74 of the Convention, to advise the Secretary-General in his task of determining the basic direction of future work of the permanent organs of the ITU in the field of space communication to ensure wider cooperation with all the Administrations and recognized private operating agencies concerned with space communications.

RESOLUTION No. 10

Problems encountered by developing countries when implementing the Plan

(Geneva, 1972; Geneva, 1976)

The CCITT,

considering

the complexity of the Plans prepared by the World Plan Committee and the Regional Plan Committees and their importance for worldwide telecommunications;

recognizing

that in implementing these Plans developing countries may encounter difficulties urgently requiring solution;

considering

the need for the problems of concern to developing countries to be clearly formulated by the Plan Committees;

resolves

that the importance of such problems should be given due recognition and that the requisite priority should be accorded for their solution.

RESOLUTION No. 12**Plan Committees***(Geneva, 1976; Geneva, 1980)*

The CCITT,

considering

(a) the report of the Director of the CCITT on the activities of the Plan Committees in the period 1973-1976 (Documents AP VI-No. 33 and No. 75);

(b) the report of the World Plan Committee on the activities of the Plan Committees in the period 1977-1980 (Document AP VII-No. 28, Part A);

(c) the adoption, by the Vth Plenary Assembly of the CCITT, of the report of the World Plan Ad Hoc Group;

and also

(d) the report of the World Plan Committee, Geneva, 1975 (Document Plan No. 17);

(e) the views expressed in §5 of the report of the Director of the CCITT (Document AP VI-No. 33);

(f) the report of the World Plan Committee on the future activities of the Plan Committees (Document AP VII-No. 28, Part B),

resolves

1 to adopt the views expressed by the World Plan Committee (Geneva, 1975 and Paris, 1980), which are contained in Annex 4 to Document AP VI-No. 33 (§§ 1 to 8, 11 and 12), namely that:

1.1 the existing terms of reference of the Plan Committee as laid down in No. 78 of the Convention (Malaga-Torremolinos, 1973) and amplified in Resolution No. 448 of the Administrative Council continue to be relevant;

1.2 the Regional Plan Committees and the World Plan Committee have a valuable function to perform and should be retained;

1.3 the development, establishment or implementation of specific network plans either regional or global in nature is solely within the competence of the countries themselves acting together in bilateral or multilateral negotiations in a variety of ways and hence is outside the terms of reference of the Plan Committees as defined in accordance with § 1.1 above;

1.4 in relation to the development of a plan in accordance with their terms of reference, the function or role of the Plan Committees is to assist Administrations and RPOAs in reaching their own sovereign decisions on their plans;

1.5 with respect to § 1.4 above there are two ways in which this role can be carried out:

1.5.1 by the collection and publication of valid and relevant planning data which is regularly updated. (This work is now proceeding in a satisfactory manner as a result of the adoption of the modified Plan Guide and Questionnaire and of the efforts of the Secretariat of the CCITT and the General Secretariat in compiling and publishing the data with the aid of the ITU computer.);

1.5.2 by the exchange of information in written contributions and through meetings of the Plan Committees and their Coordination Committee and/or Working Party, on such questions as adoption of signalling systems and other aspects of the developing telecommunication networks which depend on international cooperation for their technical feasibility. (This significant aspect of the work of the Plan Committees could be improved.);

1.6 in addition to the work described in § 1.5.2 above, which relates to § 2.1 of Administrative Council Resolution No. 448, the Plan Committees have the responsibility for performing the functions prescribed in § 2.2 of that Resolution;

1.7 these functions (i.e. those referred to in §§ 1.5.2 and 1.6 above) were dealt with in the period 1973-1976 in specific contributions from Brazil (Contribution PLAN-No. 15), Belgium (Contribution PLAN-No. 14) and the United Kingdom (Contribution PLAN-No. 9) and have also been considered by both the Plan Committee for Europe and the Mediterranean Basin (Contribution PLANEU-No. 9, pages 10-15) and the Ad Hoc Group on the future of the World Plan Committee (PLAN Document AP V-No. 12) and that all have reached similar conclusions, which are that the Plan Committees should:

1.7.1 consider questions to be submitted to the CCIs on international routing, switching, numbering, service quality, etc.;

1.7.2 consider questions on technical assistance to be submitted to the CCIs in accordance with their terms of reference;

1.7.3 organize the exchange of information concerning developments in the field of telecommunications, in order to assist countries to update general planning techniques and to introduce services and facilities;

1.8 meetings of the World Plan Committee and the Regional Plan Committees should be held only when the agenda is established and when substantial contributions to the work of the Committee have been received;

1.9 it is important that the Regional Plan Committees meet in their own regions in order to encourage greater participation on the part of countries within the regions;

1.10 as regards the duration of Regional Plan Committee meetings, it should be only sufficient to enable the Committees to complete their work irrespective of where the meetings are held;

2 to propose that the *status quo* be maintained in respect of the terms of reference and locations of the World and the Regional Plan Committee meetings till the next Plenipotentiary Conference;

expresses the hope

that the Administrative Council will be able to allocate the necessary budgetary resources in accordance with No. 244 of the Convention;

requests the Director of the CCITT

to consider, subject to financial provision, the organization of a symposium (study days, special meetings) of a few days duration in conjunction with the Plan Committees meetings which, on the lines indicated in § 10 of Annex 4 to Document AP VI-No. 33, could be organized with speakers provided by Administrations or recognized private operating agencies and designed generally to assist the Plan Committees to carry out their functions as described in § 1.7 above; and which, whenever it is thought useful, might call upon the Chairman or Vice-Chairman of the relevant CCI Study Groups;

further requests all Administrations and especially the developing countries

to participate fully in the deliberations of the Plan Committees through useful contributions and active participation in the meetings of the World and the Regional Plan Committees;

to send contributions on network management, new services, new techniques intended to replace or supplement existing conventional techniques, application of signalling systems, etc. in addition to the data presently submitted to the CCITT Secretariat; this will contribute to the development of a forum on future development and establish better contact among the different Administrations as well as between them and the CCITT/CCIR specialists.

RESOLUTION No. 13

Protection of the common names of CCITT defined international public services

(Geneva, 1980)

The VIIth Plenary Assembly of the CCITT,

considering

(a) that CCITT has defined, inter alia, the international public services "Teletex", "Telefax" and "Bureaufax" in Service Recommendations;

(b) that those international public services are characterized by complete end-to-end compatibility;

(c) that it is desirable to use on a worldwide basis for those CCITT defined international public services their respective common name, i.e. "Teletex", "Telefax" or "Bureaufax", to qualify any service provided in that respect as complying completely with the CCITT definitions for the respective international public service in order to guarantee end-to-end compatibility;

(d) that it is essential to protect the use of the aforementioned common names,

noting

(a) that, within a number of countries, several recognized private operating agencies (RPOAs) may provide such CCITT defined international public services and may also wish to add further optional user facilities in addition to the respective basic international public service as defined by the CCITT;

(b) that, for the preceding reason, some RPOAs may wish to use service designations, e.g. XXX/Teletex, indicating a combination of a basic international public service as defined by the CCITT with additional optional user facilities;

resolves to request Administrations

(1) to ensure that any such international public service offered by an Administration be denominated by its respective common name, i.e. "Teletex", "Telefax" or "Bureaufax" and comply completely with the respective CCITT definitions for such service;

(2) to endeavour to protect the common names of the CCITT defined international public services "Teletex", "Telefax" and "Bureaufax", inter alia through the communication of those names to the national, regional and international authorities for the registration and administration of trade marks and service marks in order to ensure that the said names be not made the subject of trade marks or service marks or, if claimed in an application for the registration of trade marks or service marks, be made the subject of a disclaimer;

(3) to ensure that in the case of a combination of any such CCITT defined international public service together with further optional user facilities in addition to that basic service, the trade mark or the service mark for such a combined service offered by any RPOA be always combined with the respective common name of the basic CCITT defined international public service, i.e. "Teletex", "Telefax" or "Bureaufax", and that the latter names, in the case of registration of such a trade mark or service mark, be made the subject of a disclaimer;

(4) to inform the Director of the CCITT continuously about the measures taken with regard to *resolves* (1) to (3) above;

requests the Director of the CCITT

to compile the information received in respect of such measures and to make this information available on request for consultation by Administrations.

RESOLUTION No. 14

CCITT technical assistance to the developing countries

(Geneva, 1980)

The CCITT,

considering

(a) that one of the purposes of the Union is to "foster the creation, development and improvement of telecommunication equipment and networks in developing countries by every means at its disposal, especially its participation in the appropriate programmes of the United Nations" (No. 19 of the International Telecommunication Convention, Malaga-Torremolinos, 1973);

(b) that another of the Union's purposes is to "undertake studies, make Regulations, adopt Resolutions, formulate Recommendations and Opinions and collect and publish information concerning telecommunication matters" (No. 21 of the Malaga-Torremolinos Convention, 1973);

(c) that Nos. 72 and 309 of the Malaga-Torremolinos Convention, 1973, provide that "in the performance of its studies, each Consultative Committee shall pay due attention to the study of Questions and to the formulation of Recommendations directly connected with the establishment, development and improvement of telecommunication in developing countries in both the regional and international fields", and that "at the request of the countries concerned, each Consultative Committee may also study and offer advice concerning their national telecommunications problems. The study of such problems should be in accordance with 308";

considering further

(d) that the VIth CCITT Plenary Assembly expressed the following views:

"... considers it important to emphasize the need for full cooperation by *all concerned* in the organization of seminars and training sessions" and "hopes that the CCITT will be able to play an ever more active part in this field";

(e) the Report by the Director of the CCITT to the VIIth Plenary Assembly;

(f) the work already carried out or planned in the field of technical assistance by various Administrations, such as their participation in Study Groups, Special Autonomous Groups, Regional Study Groups, Plan Committees, etc.;

(g) that the variations in the workload of the CCITT Specialized Secretariat makes it possible, between the peak loading which occurs at the time of the interim and final Study Group meetings and of the Plenary Assembly, for the services of technically qualified members of the CCITT Specialized Secretariat to be employed for the benefit of developing countries, while at the same time widening and updating the practical experience of this staff,

recognizing

(h) that developing countries have urgent need to evolve their telecommunication networks and services in a most efficient and cost effective manner, thereby achieving their national aspirations and goals improving their ability to communicate nationally and internationally in this era of technological revolution;

(i) that it is essential to optimize the utilization of such valuable resources as the expertise of Administrations and available funding within a limited time;

(j) that, for various reasons, the Administrations of developing countries are not in a position to send delegations to the meetings of the CCIs or send only very few participants, which means that they are unable in many respects to derive full benefit from the discussions,

resolves

(1) that in order to improve technical assistance and technical cooperation, particularly for developing countries, the Director of the CCITT, in accordance with Article 12 of the Convention, should propose to the Coordination Committee programmes of seminars of special interest to developing countries, for implementation through the Technical Cooperation Department (TCD), the latter being the focal point for technical cooperation within the ITU;

(2) that the CCITT, in consultation with the Study Group Chairmen, as well as the Chairmen of Special Autonomous Groups and Regional and World Plan Committees, should endeavour to assist the TCD in its technical cooperation activities;

(3) that the ITU General Secretariat and the other organs of the ITU should help the developing countries in identifying areas in which technical assistance is urgently needed;

(4) that in intervals between peak pressure in the workload of the CCITT Specialized Secretariat, the Director of the CCITT should:

invite the Secretary-General to consider the possibility of calling upon the services of appropriately qualified engineers of the CCITT Specialized Secretariat for the purpose of short-term technical assistance missions undertaken by the ITU under the aegis of the United Nations Development Programme in conformity with the programming of the Technical Cooperation Department of the ITU General Secretariat, in cases where other suitable experts are not readily available;

(5) that the Administrations of the developing countries should take more active part in the activities of the CCITT Study Groups, Special Autonomous Groups and Plan Committees,

- a) by participating and sending reports and contributions to the CCITT for consideration by the relevant Study Groups, bringing out clearly the characteristics of the respective areas which may affect the corresponding studies,
- b) by sending delegates to Study Group and Plan Committee meetings, especially to seminars and symposia as well as the Special Autonomous Group meetings and by taking advantage of the participation of countries of the same region in such meetings,
- c) by collaborating to the fullest extent possible and in the spirit of Administration Council Resolution No. 448 relating to a plan for the implementation of telecommunication networks,
- d) by submitting from time to time to the Director of the CCITT, questions that they would like studied by the various CCITT Study Groups in accordance with No. 308 of the International Telecommunication Convention,
- e) by replies to the questionnaires issued by the CCIs and by the exchange, among themselves, of technical information on CCITT matters in areas of common interest;

(6) that in order to improve the flow of information from the CCITT to developing countries, the CCITT should:

- a) prepare the texts in the Volumes of the CCITT in as clear a manner as possible, with suitable explanations on the scope and purpose of Recommendations, with analytical tables and with adequate references to make it easier to trace texts dealing with specific subjects, particularly subjects of interest to the developing countries,
- b) arrange expeditious printing and publication of information papers such as handbooks and manuals of interest to developing countries based on studies undertaken by Study Groups, Special Autonomous Groups and Plan Committees, keeping the Administrations properly informed through appropriate circulars,
- c) include in the reports appearing in the working papers published after each interim meeting and in the Volumes of the CCITT published after each Plenary Assembly a section, as comprehensive as possible, especially devoted to problems of interest to developing countries;

(7) that, in accordance with the pertinent points of Resolution No. 1, the CCITT timetable of meetings should take account, for example, of preferences which might be expressed by countries remote from Union Headquarters for either the combination or the sequential grouping of meetings of several Study Groups and/or their Working Parties over a period longer than the five to seven working days now customary for an isolated meeting of a Study Group or Working Party;

resolves further

(8) that the Director of the CCITT shall make an annual report to the Administrative Council on the implementation of this Resolution. In this report, the Director of the CCITT shall highlight what has been achieved in this area and lay stress on any difficulties encountered,

and requests

the Administrative Council to consider the possibility of providing the CCITT with the necessary means to carry out the activities mentioned in this Resolution.

OPINIONS**OPINION No. 1****Location of CCITT meetings**

The Special Assembly of the CCITT (Geneva, 1958) and the VIth Plenary Assembly (Geneva, 1976)
express the opinion

that the holding of meetings of the CCITT outside Geneva is desirable in certain circumstances, in so far as these meetings remain within the possibilities of the CCITT budget (cf. Resolution No. 26 of the Plenipotentiary Conference of Malaga-Torremolinos, 1973).

The IIIrd Plenary Assembly of the CCITT (Geneva, 1964), the Vth Plenary Assembly of the CCITT (Geneva, 1972) and the VIth Plenary Assembly of the CCITT (Geneva 1976).

express the opinion

(1) that the invitations of the meetings would be submitted to the Plenary Assembly of the CCITT and provisionally be accepted by it, subject to the credits allocated to the CCITT which allow of honouring them;

(2) that the inviting Administrations conform to Decision No. 304 of the 1963 session of the Administrative Council of the ITU.

Remark – Text of Council Decision No. 304:

“The Council decided that, in view of the provisions of the Convention that all Members shall be entitled to participate in conferences and meetings of the Union, the Secretary-General, when drawing up an agreement with an inviting government on the arrangements to be made concerning a conference or meeting of the Union, shall include therein a clause to the effect that the inviting Administration shall apply without reservation the provisions of the Convention and shall permit the persons attending on behalf of Members of the Union and other bodies invited, and officials of the Union, as well as their families, to enter the country concerned and to sojourn therein throughout the duration of their function or mission in connection with the conference or meeting”.

OPINION No. 2**Exchange of views on new techniques
at CCITT meetings**

The Special Assembly of the CCITT (Geneva, 1958)
expresses the opinion

(1) that the Director of the CCITT in agreement with the Chairman of the Study Group or sub-Group concerned and with the consent of the inviting Administration, if there is one, should organize an exchange of views and opinions on new techniques in the telegraph and telephone field on the occasion of CCITT meetings;

(2) that, in principle, the time spent on this exchange of views should not prolong the meeting by more than one day.

OPINION No. 3**Preliminary examination of new draft Questions**

The Vth Plenary Assembly (Geneva, 1972), and the VIIth Plenary Assembly of the CCITT, (Geneva, 1980)
considering

(a) that, when new draft Questions are handed in just before the meetings of a Plenary Assembly, the Study Groups concerned are not always able to make a thorough study of their real object and to submit them in a clear and precise form;

(b) that the study of these Questions is often rendered difficult thereby;

express the opinion

(1) that the Administrations or recognized private operating agencies which want the Plenary Assembly to set a new Question for study should hand in the text of such Question to the CCITT Secretariat at least two months before the opening date of the last meeting of the Study Group concerned preceding the Plenary Assembly;

(2) that proposed Questions should be accompanied by reasons justifying the interest of the Questions, with an indication of their degree of urgency;

(3) that Administrations should for this purpose use a form for handing in new Questions based on the form annexed hereto;

(4) that the forms received by the CCITT Secretariat should be circulated to the members of the Study Group (or groups) concerned so as to be received at least one month before the opening of the Study Group meeting;

(5) that the same procedure should be used for the studies proposed by the Director of the CCITT;

(6) that each Study Group should consider these new Questions at its final meeting and determine that the study of the Question serves a real purpose. A ranking of urgency should be assigned to the Questions.

Some suggested guidelines are:

- i) The Question should specify all information needed. Where possible, and if considered useful in clarifying the Question, the draft of the new Recommendation or an outline of the contents of the new Recommendation should be included.
- ii) The purpose of the Questions should be clear, with indication of the kind of new Recommendation desired, or of specific additions or changes in existing Recommendations contemplated.
- iii) A Question calling for changes in existing Recommendations should make clear why the existing Recommendations need change with indications as to how new proposals will improve matters.
- iv) A Question should avoid asking individual members to make extensive tests or provide extensive statistical or other data unless this is clearly essential and likely to lead to some useful results within the Plenary Assembly study interval.
- v) A Question should not be so comprehensive in scope as to discourage responses and therefore remain on the agenda for a long period of years.

ANNEX A
(to Opinion No. 3)

CCITT

Study Group No...

FORM FOR HANDING IN A NEW QUESTION

Source:

Date of handing in:

Text of Question:

Type of Question ¹⁾:

Reasons or experience motivating the proposed new Question:

Date by which the Recommendation should be issued, and order of urgency ²⁾:

Draft of the Recommendation or outline of the contents of the draft Recommendation:

OPINION No. 5

**Examination at Regional Plan meetings of certain Questions
outside the Plan Committee's terms of reference**

The Vth CCITT Plenary Assembly (Geneva, 1972),

considering

(a) that, at meetings of the Regional Plan Committees, participating countries have often submitted Resolutions or Opinions or have requested studies on Questions which do not come within the competence of the Plan Committees, as defined in Administrative Resolution No. 488, of the CCITT or CCIR as laid down in the Convention (Montreux, 1965, Article 14, § 5);

¹⁾ Background question, question designed to lead to a Recommendation, etc.

²⁾ The urgency will be: short term, leading to the issue of a Recommendation by the next Plenary Assembly, or long term.

(b) that these Resolutions, Opinions and studies generally fall within the field of the IFRB or of the Department of Technical Cooperation of the General Secretariat;

(c) that it is quite understandable that countries which cannot send delegates to all meetings held outside their continents should take the opportunity, when the plan Committee meets in their continents, of submitting all requests within the province of the ITU without considering whether or not they are the responsibility of a Plan Committee;

(d) that it is important to do everything possible to satisfy these countries' desires within the limits of the statutory duties of the Consultative Committees;

requests the Administrative Council to recommend

(1) that, when Plan meetings are held, separate meetings may be arranged, either before or after, but outside the Plan meetings, in the same place and under the aegis of the competent organs of the Union for the purpose of examining Questions pertaining to the IFRB or the Technical Cooperation Department of the General Secretariat;

(2) that the expenses incurred for the common services provided at such series of meetings should be borne by the ITU budget sections in a manner to be agreed by the heads of the organs concerned.

OPINION No. 6

Resources of the CCITT

The Vth Plenary Assembly of the CCITT (Geneva, 1972) and the VIth Plenary Assembly (Geneva, 1976),
considering

(a) the worldwide need for improved communication among peoples;

(b) the development, often described as explosive, of public telecommunications¹⁾ and the fact that investment in the telecommunication equipment required is bound to increase at the same rate;

(c) the large economic interest of the CCITT Recommendations, through the standardization they provide for the telecommunication undertakings (Administrations or private operating agencies) of the countries Members of the ITU;

(d) the desirability of framing CCITT Recommendations applicable on a world scale in advance of, rather than subsequent to, agreement on regional standards;

(e) the need for CCITT Recommendations approved by the Plenary Assembly to be made available promptly to Administrations;

express the wish that

the competent organs of the ITU, as designated by Nos. 22, 23 and 24 of the 1973 Convention;

(1) take into due consideration:

- the ever-increasing importance of public telecommunications¹⁾ and their sustained growth;
- the essential role to be played by the CCITT in the establishment at international level of standards for telecommunication networks, which can now be developed harmoniously only within the framework of a universal, worldwide plan;

(2) ensure that all the necessary facilities are accorded to the CCITT and its Secretariat to carry out its work.

OPINION No. 7

Appointment of Study Group Chairmen and Vice-Chairmen

The Vth Plenary Assembly of the CCITT (Geneva, 1972),
recognizing

(a) that the efficient working of Study Groups depends critically on the quality of their Chairmen and Vice-Chairmen and upon the time they are able to devote to adequate preparation for meetings;

¹⁾ Public telecommunications = telephone, telegraph, telex, data transmission.



noticing

(b) that the appointment of Chairmen and Vice-Chairmen is covered by the specific and detailed provisions of No. 792 (Chapter 15) of the General Regulations annexed to the Montreux Convention, 1965;

(c) that §§ 2b ii), 4 and 8 of CCITT Resolution No. 1 stipulate the procedure for the designation of Study Group Chairmen and Vice-Chairmen;

suggests

that Heads of Delegations should bear the spirit of the following points in mind when implementing the above-mentioned provisions:

- 1) Appointments should be made primarily on the basis of individual competence (in the technology of the Study Group concerned as well as in chairing meetings).
- 2) Chairmen who are not in direct touch with the technology of their Study Group through change of duty in their own Administration or other cause, or who find they cannot devote adequate time to the work, should not be expected to continue in office indefinitely.
- 3) Chairmen need not automatically be re-elected; it may sometimes be useful to limit the term of office of a Chairman, but there should be no hard-and-fast rule on this point.
- 4) New Vice-Chairmen of Study Groups (and, in some cases, chairmen) may be expected to be drawn from among the existing Chairmen of Working Parties who have proved their competence.
- 5) Within the limits of these principles, nationals of as many countries as possible should be included in the list of office-holders showing, if possible, a reasonable geographical balance.

OPINION No. 8

Publication of Handbooks

The VIth CCITT Plenary Assembly (Geneva, 1976),

considering

- (a) the importance it attaches to the activities of the CCITT Special Autonomous Study Groups (GAS);
- (b) the interest of the GAS Handbooks to Administrations, particularly in developing countries, and to recognized private operating agencies;
- (c) the considerable workload involved in the drafting of the GAS Handbooks;

noting with concern

- (d) the high selling price of the Handbooks despite the fact that it reflects only printing and distribution costs;

recognizing

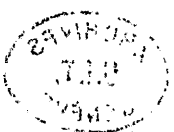
- (e) the necessity for extensive distribution of the technical information in the GAS Handbooks, which can be achieved only if the price is reasonable;

expresses the opinion

(1) that the Secretary-General should study ways and means of bringing down the selling price of the GAS Handbooks to a level comparable to that of other technical publications of the same standard, and report to the 1977 Administrative Council;

(2) that Administrations and recognized private operating agencies should help to promote the sale of GAS Handbooks in their countries:

- by recommending them to the various technical institutions, and
- by giving them appropriate publicity.



OPINION No. 9**Terms of reference of the CCITT**

The VIth CCITT Plenary Assembly (Geneva, 1976) and the VIIth CCITT Plenary Assembly (Geneva, 1980),
bearing in mind

(a) Resolution No. 44 of the Plenipotentiary Conference of Malaga-Torremolinos (1973);

(b) that unique definitions of the terms "telegraphy" and "telephony" are not available and that such definitions are not essential for revising the terms of reference of the CCITT;

are of the opinion that

the next Plenipotentiary Conference:

should consider the following revision for the terms of reference of the CCITT at present set forth in Article 11, No. 71 of the 1973 Convention:

"71 (Rev.) The duties of the International Telegraph and Telephone Consultative Committee (CCITT) shall be to study, and issue Recommendations on technical, operating and tariff questions relating to telecommunication services, other than technical or operating questions relating specifically to radiocommunications which according to No. 70 come within the purview of the CCIR.

For this purpose, telecommunication services are considered as telecommunications which are provided by an Administration or recognized private operating agency and intended mainly as a public correspondence service, and which are generally subject to appropriate remuneration. These services include several branches such as telephone, telegraph, data transmission, leased circuit, etc."

OPINION No. 10**International Monetary Unit**

The VIIth Plenary Assembly of the CCITT (Geneva, 1980)

considering

(a) that the breakdown of the gold based par value system of international exchange rates has created serious difficulties for Administrations and recognized private operating agencies in converting the balances of international telecommunications accounts expressed in gold francs into a currency of settlement;

(b) that the ratification and entry into force on 1st April 1978 of the second amendment to the Articles of Agreement of the International Monetary Fund has:

i) furthered the demonetization of gold, in that its members will no longer make any reference to gold in establishing the value of their currencies, and

ii) provided a legal framework for a more flexible exchange rate system;

(c) that in the period following the entry into force of the second amendment to the IMF Articles of Agreement, the market price of gold has undergone a massive increase in terms of the currencies of many nations,

(d) that the CCITT, at the request of the Administrative Council of the ITU, convened the Special Working Party UMI which, after three years and several difficult deliberations, developed a draft Recommendation providing for interim methods of settling international telecommunications balances of account.

(e) that the ITU Members, by the accelerated procedure provided for in Resolution No. 2 of the VIth Plenary Assembly of the CCITT, gave provisional approval to the draft Recommendation,

(f) that the VIIth Plenary Assembly of the CCITT approved definitively that Recommendation.

recognizing

(g) that changes to Article 30 of the ITU Convention are necessary so as to provide for an easily valued monetary unit for the composition of the tariffs of the international telecommunications services and in the establishment of international accounts;

(h) that, following the second amendment to the Articles of Agreement of the IMF, certain provisions in the existing Appendix 1 to the Telegraph and Telephone Regulations are no longer valid;

(i) that nothing in the foregoing should imply an amendment to Article 31 of the ITU Convention under which Administrations and recognized private operating agencies have the right to make special arrangements,

expresses the opinion

- (1) that the next Plenipotentiary Conference should:
 - a) examine the provisions of Article 30 of the International Telecommunications Convention,
 - b) make provision for a rate of conversion between the gold franc and any new monetary unit,
- (2) that the next competent World Administrative Telecommunications Conference should revise Appendix 1 to the Telegraph and Telephone Regulations in accordance with the decisions of the Plenipotentiary Conference. Such revision should provide for:
 - a) a means whereby balances of accounts may be converted into currencies of payment,
 - b) if declared parities are utilized, a means of publishing such parities and ensuring that they are broadly consistent both with each other and with any parity established with another monetary unit (e.g., the SDR) whether such a parity was established by the Convention, Regulations or CCITT Recommendations.

OPINION No. 11

Coordination with organizations outside the ITU

The VIIth Plenary Assembly (Geneva, 1980)

considering

- (a) that Article 40 of the International Telecommunication Convention (Malaga-Torremolinos, 1973) states that in furtherance of complete international coordination on matters affecting telecommunications, the Union shall cooperate with international organizations having related interests and activities;
- (b) that CCITT cooperates with several organizations outside the ITU in particular with IEC and ISO;
- (c) that principles of such cooperations are laid down in Resolution 8 and Recommendations A.12, A.13, A.20;
- (d) that in future the scope of such cooperation might be enlarged;

invites

the Administrations to carry out a thorough examination of the issues related to this topic during the coming study period with a view to proposing to the VIIIth Plenary Assembly any necessary changes concerning the principles of organization of cooperation with organizations outside the ITU.

OPINION No. 12

Future evolution of the Study Groups structure

The VIIth CCITT Plenary Assembly (Geneva, 1980)

noting

- (a) that there appears to be a common trend regarding the need for consideration of the future evolution of the CCITT Study Groups;
- (b) that the necessity to draw together related subjects into common Study Groups can be identified, as for example in the case of:
 - i) the definition of services and facilities,
 - ii) operational matters,

considering further

- (c) that with the development of ISDN all aspects of the traditionally separate voice and non-voice services will be drawn closer together,

is of the opinion

- (1) that related CCITT studies should be concentrated in the future in a manner which reflects this growing commonality of service provision;
- (2) that during the forthcoming study period proper consideration should be given to achieving the coordination of the studies referred to above and also of other studies having the same nature but not detailed here;

and requests

the Director of the CCITT to use the powers assigned to him to coordinate the views of interested parties and make recommendations to Members in time for consideration at the VIIIth Plenary Assembly.

OPINION No. 13**Pagination of the CCITT Book**

The VIIth Plenary Assembly of the CCITT (Geneva, 1980)

considering

- (a) the desire to make the CCITT Book as useful as possible to its users;
- (b) the techniques used in preparing CCITT Book texts and new techniques which are evolving;
- (c) the experience of CCITT Book users in different environments;
- (d) the concerns of the Administrative Council of the ITU regarding economical operations;
- (e) the reservations expressed by certain delegations concerning the use of non-parallel pagination in the CCITT Book;

expresses the opinion

- (1) that the relative merits of parallel versus non-parallel pagination of the CCITT Book deserve to be examined in greater depth,
- (2) that the Administrative Council should conduct an in-depth inquiry into the matter of parallel versus non-parallel pagination which will examine in as much detail as possible the various aspects involved,
- (3) that, in the process of the inquiry, Administrations and Study Group Chairmen be consulted for their views and experiences,
- (4) that the results of such an inquiry be made available to all Administrations no less than 3 months before the 1984 CCITT Plenary Assembly.

OPINION No. 14

The CCITT VIIth Plenary Assembly, (Geneva, 1980)

considering

- (a) the wide scope of the CCITT work programme adopted for the 1981-1984 period;
 - (b) that the questions assigned to the Study Groups and the creation of new Special Autonomous Groups are increasing the workload of the CCITT Secretariat; and
- taking note of Document AP VII-No. 69 (Report of the Director on the CCITT Secretariat);

requests the Director of the CCITT

to submit to the ITU Administrative Council at its next session detailed proposals concerning:

- a) the careers of officials in the CCITT Specialized Secretariat;
- b) the recruitment of new officials to enable the Secretariat to deal effectively with increased workload;

invites the ITU Administrative Council

to give the most favourable consideration to the proposals which will be submitted to it by the Director of the CCITT on this subject.

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PART III

LIST OF STUDY GROUPS, PLAN COMMITTEES, WORKING PARTIES AND SPECIAL AUTONOMOUS GROUPS

LIST OF QUESTIONS AND ASSIGNMENT OF THESE QUESTIONS

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STUDY GROUPS

Designation		Title	Chairman	Vice-Chairmen
COM I	Study Group I	Definition and operational aspects of telegraph and telematic services ¹⁾ (facsimile, Teletex, Videotex, etc.)	K. FREIBURGHaus (Switzerland)	R. RÜGGERBERG (Federal Republic of Germany) M. ISRAEL (Canada) J. LEPESQUEUR (France) B. BENTON (Mrs.) (United Kingdom) M. LEON (Venezuela)
COM II	Study Group II	Telephone operation and quality of service	J. BIOT (Belgium)	C.R. CRUMP (United States) J.M. LAROCLETTE (France) G. GOSZTONY (Hungary) T. OHTA (Japan)
COM III	Study Group III	General tariff principles	M. KOJIMA (Japan)	J. O'BOYLE (United States) B. ROUXVILLE (France) A. PELLA (Italy) A. AOUDIA (Algeria)
COM IV	Study Group IV	Transmission maintenance of international lines, circuits and chains of circuits; maintenance of automatic and semi-automatic networks	J. KIIL (Denmark)	H.L. MARCHESE (United States) J.P. CAIRE (France) G. SARACO (Italy) T. SATO (Japan) H. ANDERSSON (Sweden)
COM V	Study Group V	Protection against dangers and disturbances of electromagnetic origin	G. GRATTA (Italy)	H. LORKE (German Democratic Republic) P.O. PERSSON (Sweden)
COM VI	Study Group VI	Protection and specifications of cable sheaths and poles	K. NIKOLSKI (U.S.S.R.)	LI YUANPENG (China) D.J. DEKKER (Netherlands)
COM VII	Study Group VII	Data communication networks	V.C. MacDONALD (Canada)	L. LAVANDERA SANCHEZ (Spain) H.V. BERTINE (United States) A. TEXIER (France) M. KATO (Japan) J.O. WEDLAKE (United Kingdom)
COM VIII	Study Group VIII	Terminal equipment for telematic services ¹⁾ (facsimile, Teletex, Videotex, etc.)	W. STAUDINGER (Federal Republic of Germany)	A. DUPONT (France) H. TERAMURA (Japan) A. PUGH (United Kingdom) V. SIVAKOV (U.S.S.R.)

¹⁾ The term "telematic services" is used provisionally.

Designation		Title	Chairman	Vice-Chairmen
COM IX	Study Group IX	Telegraph networks and terminal equipment	E.E. DANIELS (United Kingdom)	R. DAUDE (France) H. MATSUBARA (Japan) B.V. KOROP (Ukrainian S.S.R.) B. KUBIN (Czechoslovakia)
COM XI	Study Group XI	Telephone switching and signalling	J. RYAN (United States)	P. PLEHIERS (Belgium) P. STERN DORFF (Denmark) P. COLLET (France) C. CARRELLI (Italy) S. KANO (Japan)
COM XII	Study Group XII	Telephone transmission performance and local telephone networks	P. LORAND (France)	CAO MEIJIE (China) R. HATCH (United States) N. GLEISS (Sweden)
COM XV	Study Group XV	Transmission systems	D. GAGLIARDI (Italy)	A.M. NOURI (Saudi Arabia) H. SOULIER (France) W. MAJEWSKI (Poland) J. WHETTER (United Kingdom)
COM XVI	Study Group XVI	Telephone circuits	S. MUNDAY (United Kingdom)	G. LAJTHA (Hungary) J.L. IZAGUIRRE (Venezuela)
COM XVII	Study Group XVII	Data communication over the telephone network	V.N. VAUGHAN (United States)	K. KERN (Federal Republic of Germany) M. De JULIO (Italy) D.G. HUNT (United Kingdom)
COM XVIII	Study Group XVIII	Digital networks	T. IRMER (Federal Republic of Germany)	V. JOHANNES (United States) A. ROCHE (France) M. DECINA (Italy) K. OKIMI (Japan) H.K. PFYFFER (Switzerland)

REGIONAL TARIFF GROUPS OF STUDY GROUP III

Designation		Title	Chairman	Vice-Chairmen
	GR TAF	Tariffs (Africa)	A.D. AITHNARD (Togo)	W. DJONGA (Congo) M. KEITA (Guinea) T. KILILI (Kenya)
	GR TAL	Tariffs (Latin America)	H. PALMA (Venezuela)	S. BENTIVEGNA (Argentina)
	GR TAS	Tariffs (Asia and Oceania)	N. VIRATA (Philippines)	S. YANO (Japan) A.R. AL-AWADI (Kuwait)
	GR TEUREM	Tariffs (Europe and the Mediterranean Basin)	W. JOST (Switzerland)	S. GRUSZCZYNSKI (Poland)

JOINT STUDY GROUPS

Designation		Title	Chairman	Vice-Chairmen
CMBD	CCITT/CCIR Joint Study Group	Circuit noise and availability	A.P. BOLLE (Netherlands)	N. OHYAMA (Japan)
CMTT	CCIR/CCITT Joint Study Group	Television and sound transmission	Y. ANGEL (France) (CCIR)	W.G. SIMPSON (United Kingdom) (CCITT)
CMV	CCIR/CCITT Joint Study Group for Vocabulary	Definitions and symbols	M. THUÉ (France) (CCIR)	M. DUCOMMUN (Switzerland) (CCITT) B.A. DURAN (Spain) (CCIR) S.J. ARIES (United Kingdom) (CCITT)

PLAN COMMITTEES

(Joint CCITT/CCIR Committees administered by the CCITT)

Designation		Title	Chairman	Vice-Chairmen
WORLD PLAN	World Plan Committee	General Plan for the development of the World Telecommunication Network	M. GHAZAL (Lebanon)	A. ALVES PEIXOTO ²⁾ (Brazil) A. MISINO (Italy) S. NOVIKOV (U.S.S.R.) C. NOGBOU ²⁾ (Ivory Coast)
AFRICA PLAN	Plan Committee for Africa	General Plan for the development of the Regional Telecommunication Network in Africa	L. DIA (Senegal)	E. KAMDEM-KAMGA (Cameroon) S.J.M. GARGARD ²⁾ (Liberia)
LATIN AMERICA PLAN	Plan Committee for Latin America	General Plan for the development of the Regional Telecommunication Network in Latin America	R.J.P. SEVERINI (Argentina)	R.A. GONZALEZ LOPEZ ²⁾ (Mexico) R. PEDROSA PEREZ ²⁾ (Cuba)
ASIA PLAN	Plan Committee for Asia and Oceania	General Plan for the development of the Regional Telecommunication Network in Asia and Oceania	A.M. AL-SABEJ (Kuwait)	N. MORISHIMA (Japan) M. RADZI ²⁾ (Malaysia) C.S. CARREON ²⁾ (Philippines)
EUROPE PLAN	Plan Committee for Europe and the Mediterranean Basin	General Plan for the development of the Regional Telecommunication Network in Europe and the Mediterranean Basin	L. TEROL MILLER (Spain)	M. LACOUT (France) G. WISNIEWSKI ²⁾ (Poland)

JOINT WORKING PARTIES

Designation	Title	Study Groups concerned ³⁾	Chairman	Vice-Chairmen
GM LTG	Use of telephone-type lines for purposes other than telephony	IV, VIII, IX, <u>XV</u> , XVII, CMBD	L. GUILLET (France)	M. MULDER (Netherlands) S. MAZGON (Hungary)
GM SMM	Maritime Mobile Service	I, II, III	F.J.M. JASPERS (Netherlands)	G. WEGENER (Federal Republic of Germany) Y. NISHIZAWA (Japan)

²⁾ Provisional appointment pending the XVth CCIR Plenary Assembly.

³⁾ The controlling Study Group is underlined.

SPECIAL AUTONOMOUS GROUPS

Designation	Title	Chairman	Vice-Chairmen
GAS 3	Economic and technical aspects of the choice of transmission systems	J.Z. JACOBY (United States)	J.C. SEYOUM (Ethiopia) S. STEFANESCU (Romania) J. RUDA (Venezuela) E. LUCAS (Spain)
GAS 4	Primary sources of energy	H. KRAKOWSKI (Federal Republic of Germany)	H. GRAF (Switzerland) N.S. CHRISTOPHER (United States)
GAS 5	Economic and social problems relating to telecommunication development	M. BENEDETTI (Italy)	L. VIROL (France) F.M. MGAYA (Tanzania) R. CRISCOLO (Argentina)
GAS 7	Rural telecommunications	C. RUDILOSSO (Italy)	A.B.M. TAHER (Bangladesh) R. MALDONADO (Venezuela) S.J.M. GARGARD (Liberia)
GAS 8	Economic and technical impact of implementing a regional satellite network	G. MALLEUS (France)	N. MAZZARO (Argentina) D. HELLA ONDO (Gabon) A.P. DJIWATAMPU (Indonesia) K. KOHIYAMA (Japan) E. ABOU-MRAD (Lebanon)
GAS 9	Economic and technical aspects of transition from an analogue to a digital telecommunication network	L. ACKZELL (Sweden)	A.F. GARCIA (Argentina) M. DABBAS (Jordan) A. OBATA (Japan) S. MBAYE (Senegal) M. MOONEY (United Kingdom)

**LIST OF QUESTIONS TO BE STUDIED DURING THE STUDY PERIOD 1981-1984
AND THEIR ALLOCATION TO STUDY GROUPS
AND JOINT WORKING PARTIES**

General

A Question is considered urgent if special steps have to be taken to enable its study to be completed before the next Plenary Assembly. These Questions are marked with an asterisk (*).

STUDY GROUP I

Question	Short title
1/I	Quality of service objectives applicable to the services under study
2/I*	Operational aspects of data transmission; particularly the operational and service aspects of public data transmission services
3/I*	Automatic message switching service
4/I	Revision of the Series F Recommendations relating to the telegram service except the provisions on charging and accounting
5/I	Development of the public telegram service
6/I	Revision of the Series F recommendations relating to the interconnection of the radiotelex service and the international telex service
7/I	Interconnection of the international mobile telegraph and telematic ¹⁾ services with the corresponding international services
8/I	Teletex service
9/I*	Interworking between different text communication services
10/I	Operational provisions for an international facsimile service between public bureaux and subscriber stations and vice versa
11/I	Revision of the operational provisions for the international public facsimile services contained in the Series F Recommendations
12/I*	New facilities for telex, including "store-and-forward" aspects
14/I	Revision of the Series F Recommendations relating to the telex services except the provisions on charging and accounting
16/I	Operational aspects of future developments in the Maritime Mobile Service
17/I	Revision of Recommendations concerning public correspondence in the Maritime Mobile Service
18/I	Revision of the Series F Recommendations relating to phototelegraph services except the provisions on charging and accounting
19/I	Videotex service
20/I	Telewriting service
21/I*	Utilization of the standards and options in the Series S and T Recommendations for the telematic ¹⁾ services

¹⁾ The use of this term is provisional.

STUDY GROUP II

Question	Short title
1/II	Application of the instructions for the International Telephone Service and any amendments required
2/II	Use of computers to supply information requested on call number of telephone subscribers in foreign countries
3/II	Choice and standardization of supplementary services offered to telephone users
4/II	Customer performance in fully automatic working in the worldwide telephone network
5/II	Standardization of symbols and other aspects of subscriber equipment to meet human factor needs
6/II	Instructions for users of the worldwide telephone network
7/II	Elements of supplementary service control procedures and human factor aspects of user indications
8/II	Human factors aspects of user interactions in computer-based systems in international telecommunications
9/II (16/I)	Operational aspects of future developments in the Maritime Mobile Service (to be studied by Joint Working Party SMM Question 1/SMM)
10/II (17/I)	Revision of Recommendation concerning public correspondence in the Maritime Mobile Service (to be studied by joint Working Party SMM Question 2/SMM)
11/II*	International interconnection of the different mobile telephone services and the public switched telephone network
12/II*	Development of the World Telephone Numbering Plan
13/II*	Review of World Routing Plan
14/II	Use of switched telephone network for non-telephone applications
15/II*	Observations on quality of international service
16/II	Models for International Network Planning
17/II	Alleviation of transmission-facility failure conditions
18/II*	Network management
19/II	Methods and procedures for traffic measurements
20/II	Methods for the measurement and computation of grade of service and formulation of GOS standards of international circuit groups
21/II	Methods for forecasting international traffic
22/II	Dimensioning of alternate routing networks taking into account 24-hour traffic profiles
23/II	Grade of service in international telephone exchanges
24/II	Grade of service and new performance criteria under failure conditions in international telephone exchanges
25/II*	Traffic and operational requirements for SPC (especially digital) telecommunication exchanges
26/II (3/IV)	Preparation of a Handbook on "Service quality, network maintenance and management" (New Question, to be studied jointly by Study Groups II and IV)

STUDY GROUP III

Question	Short title
1/III	Amendments and additions to Recommendation D.1
2/III	Amendments and additions to Recommendation D.2
3/III	Amendments and additions to Recommendation D.3
4/III	Tariff principles for the leasing of international transmission facilities intended for the transmission of data by digital techniques
5/III*	Identification of new international telecommunication services and development of tariff principles thereof to meet the specific requirements of certain categories of users
6/III	General tariff principles applicable to data transmission on public data networks
7/III	Tariff principles for public data transmission services on public packet-switched networks
8/III	Tariff principles applicable to public data transmission services in public circuit-switched networks
9/III	Tariff and accounting arrangements for the different public network interworking options
10/III	Tariffs in the public telegram service
11/III	Revision of Recommendations relating to the telegram service provisions on charging and accounting
12/III	Revision of Recommendations relating to the telex service provisions on charging and accounting
13/III	New services and facilities for telex and other 50-baud telegraph services
14/III	Revision of Series F Recommendations relating to phototelegraph services provisions on charging and accounting
15/III	Revision of the provisions of Recommendation D.180 on the ordering and charging procedures for occasional sound- and television-programme transmissions
16/III	Leased international sound- and television-programme circuits
17/III	Revision and amendment, if necessary, of accounting and associated procedures set forth in the Recommendations on international telephone accounting, their methods of application and the treatment to be applied to them
18/III	Tariff principles for international public facsimile services
19/III*	Tariff principles for an international Teletex service
20/III*	Establishment of tariff and accounting principles for the international Videotex service
21/III	Tariff guidelines for integrated services digital networks
22/III	Interconnection of maritime satellite communication services and other mobile services with the international telex network
23/III*	Taking into account the difficulties experienced in the operation of the international monetary system and foreseeable developments in this field, what monetary unit(s) should be used for rate-fixing and the establishment and settlement of accounts in international telecommunication relations?
24/III	Terms and definitions for the Recommendations dealing with tariff and accounting principles
25/III	Fixing of basic components of tariffs for telecommunication services
26/III	Cost study for determining the basic tariff components for sound- and television-programme transmissions and leased sound- and television-programme circuits
27/III	Charging and accounting aspects of future developments in the Maritime Mobile Service (Question to be studied by the SMM Joint Working Party)

STUDY GROUP IV

Question	Short title
1/IV	Network investigation and measurements
2/IV*	Maintenance functions in the CCITT man-machine language
3/IV	Preparation of a handbook on "service quality, networks maintenance and management"
4/IV*	Maintenance of maritime satellite systems
5/IV	Maintenance of groups, supergroups, etc.
6/IV	Maintenance methods for common channel signalling systems
7/IV*	Keeping Volume IV of the CCITT Book up to date
8/IV	Assessment of network performance
9/IV	Re-establishing service with the help of wideband switching
10/IV	Measuring instrument specification
11/IV	Automatic transmission measuring equipment and maintenance test access lines
12/IV	Maintenance methods and maintenance equipment for sound-programme circuits
13/IV	Test equipment for the maintenance of television transmissions
14/IV	General maintenance organization
15/IV	Facilities for maintenance
16/IV*	Maintenance Recommendations for digital circuits, paths, networks and new digital and analogue transmission systems
18/IV	Maintenance of telephone-type circuits
19/IV	Maintenance of sound-programme circuits
20/IV	Maintenance of television circuits
22/IV	Availability of international circuits
24/IV	Exchange of network maintenance information

STUDY GROUP V

Question	Short title
1/V*	Arrangement and purpose of protective components fitted at main distribution frames and other connection points
2/V	Problems arising from the use of devices and techniques reducing the unwanted voltages in wires with respect to earth
3/V	Disturbance to telecommunications circuits due to the operation of over-voltage protection devices
4/V	Screening effect of metallic-sheathed cables with a plastic covering
5/V*	Protection policy against over-voltages
6/V	Coordinated protection schemes for telecommunication cables
7/V*	Characteristics and testing of protective components and assemblies
9/V	Danger to cables exposed to the potential rise due to earthfault currents or lightning currents through the earthing of power facilities
11/V	Disturbance to telecommunications circuits from power-line carrier systems
13/V	Unbalance of telephone installations
14/V	Disturbances to telecommunications networks due to geo-magnetic storms
15/V	Reduction of interference from harmonics in power and traction lines
19/V	Effect of radio station emissions on telecommunication circuits
21/V	Tests to be carried out on power-fed transistorized repeaters to check the efficiency of the protection from external interference
22/V	Protection of telecommunication lines and equipment against lightning discharges
24/V	Problems of earthing in telecommunication systems
26/V	Revision of the "Directives concerning the protection of telecommunication lines against harmful effects from electricity lines"

STUDY GROUP VI

Question	Short title
1/VI	Aluminium cable sheaths. Protective coverings for these sheaths
2/VI	Protection against corrosion of aluminium conductors and joints
3/VI	Use of plastic materials as protective coverings for metal cable sheaths
4/VI	Cable sheaths made of plastics
5/VI	Attacks on plastic or metal cable sheaths by insects, rodents or micro-organisms. Protection against these attacks
6/VI	Cables with plastic-insulated conductors
7/VI	Methods for making conductor joints of metallic cables
9/VI	Coordinated protection schemes for telecommunication cables
10/VI	Termination of cable conductors
11/VI	Amendments and additions to the "Recommendations concerning the construction, installation and protection of telecommunications cables in public networks"
12/VI	Amendments and additions to the booklet "The protection of telecommunication cables by pressurization"
13/VI	Corrosion due to direct-current exchange with nearby electrode systems
14/VI	Requirements when conventional armouring is not used
15/VI	Long-length cabling
16/VI	Bending of cables
17/VI	Mechanical aspects of optical fibre cable design
18/VI	Methods of making joints in optical fibre cables
19/VI	Joint use of tunnels and trenches by pipe-lines and telecommunication cables

STUDY GROUP VII

Question	Short title
1/VII	Standardization of user classes of service for public data networks
2/VII	Standardization of user facilities
3/VII*	Interworking requirements
4/VII	Sub-addressing
5/VII	Message handling facilities
6/VII	Routing principles for public data network
7/VII	Quality of service in public data networks
8/VII	Call progress signals
9/VII	Subscribers' service in public data networks
10/VII*	Interconnection of the public switched data transmission service and the Maritime Mobile-Satellite Service
11/VII	Common channel signalling for data applications
12/VII	Principles and procedures for realization of international user facilities and network utilities for data services
13/VII	Common aspects of inter-exchange signalling for the circuit switched data service
14/VII	Standardization of decentralized control signalling for international connections between public data networks
15/VII*	Arrangements and procedures for inter-network signalling between public data networks and other public networks
16/VII	Requirements and arrangements for the provision of data services in ISDN
17/VII	Application of man-machine language to data service
18/VII	Interworking of networks offering packet switched data communication service
19/VII	DTE/DCE interface characteristics for single-call DTEs using Recommendation X.21 for call control and wishing to interwork with packet-mode DTEs
20/VII*	Multipurpose interface(s) for customer access to data services in ISDN
21/VII	Further study on Recommendations for DTE/DCE interfaces for circuit switched service
22/VII	Simplified datagram interface
23/VII	Further study of DTE/DCE interfaces for terminals operating in the packet mode
24/VII	Further study of DTE/DCE interfaces for interworking between terminals of dissimilar user classes of service
25/VII	Interchange circuits
26/VII*	Study of points arising from the accommodation of specific service application (e.g. recommended applications) in public data service
27/VII*	Structure for and use of a reference model for public data network applications

STUDY GROUP VII (continued)

Question	Short title
28/VII	Transmission schemes for the international interface at 64 kbit/s between synchronous data networks
29/VII	Timing and synchronization of data networks
30/VII	Use of 64 kbit/s time slots to carry single low-speed network-synchronous data channels
31/VII	Interworking between an anisochronous and a synchronous data network for the provision of user classes of services 1 and 2
32/VII	General principles of maintenance of public data networks
33/VII	General principles of maintenance of customer services
34/VII	Maintenance and operation of international links between two public data networks
35/VII	Provision of features in the DTE/DCE interfaces for public data networks for fault identification and isolation at the physical level
36/VII	Access to circuit switched digital data services through an analogue telephone network
37/VII	Definitions of terms arising during the study of public data networks
38/VII*	Integration of satellite systems in data transmission networks
39/VII	System description techniques for X-series interface and signalling Recommendations
40/VII	Multiplexer for single-channel-per-carrier (SCPC) satellite systems for use with R.101 and R.111 TDM and other CCITT recognized user rates
41/VII	Numbering plan for public data networks

STUDY GROUP VIII

Question	Short title
1/VIII	Revision of Recommendations
2/VIII	Definitions
3/VIII	Analogue facsimile equipment
4/VIII	Permissible power levels in facsimile transmission over telephone-type circuits
5/VIII	Use of telephone-type circuits for facsimile telegraphy
6/VIII	Group 3 facsimile apparatus
7/VIII	Group 4 facsimile apparatus
8/VIII	Use of Group 4 apparatus on the public networks
9/VIII	Interworking between different facsimile apparatus groups
10/VIII	Technical implications for new facsimile services under study by Study Group I
11/VIII	Utilization of the standards and options in the Series S and T Recommendations in the telematic ⁴⁾ services
12/VIII	New forms of fixed image communication
13/VIII	Digital phototelegraph equipment
14/VIII	Technical characteristics of Teletex terminals
15/VIII	Standardized options for Teletex terminals
16/VIII	Development of control procedures for text communication services
17/VIII	Enhancements to the network-independent basic transport service for Teletex
18/VIII	Link layer protocols for use with a half-duplex transmission facility
19/VIII	Enhancements of the Teletex terminals for information retrieval applications
20/VIII	Optional repertoires and coded sets for Teletex
21/VIII	Graphic subrepertoires for Teletex
22/VIII	Consolidation of Recommendations on text communication character sets and coding schemes
23/VIII	Interworking between terminals participating in different text communication services
24/VIII	Interactive Videotex
25/VIII	Presentation coding for graphic communication systems
26/VIII	Terminal equipment for the «Telewriting» service

⁴⁾ The use of this term is provisional

STUDY GROUP IX

Question	Short title
1/IX	Revision of Recommendations
2/IX	Reduction of transmission levels in FMVFT systems
3/IX	Reliability of telegraph transmission
4/IX	Routing of FMVFT systems on PCM telephone-type circuits
5/IX	Effects of bearer characteristics on telegraph transmission quality
6/IX	Network plans
7/IX	Automatic maintenance tests of telegraph circuits
8/IX	Revision of the maintenance organization for international telegraph networks, equipment and circuits
9/IX	Maritime telegraph transmission standards and interconnection of maritime communication services with the international telex network
10/IX	Automatic identification and removal of faulty telegraph-type international circuits from service
11/IX	Definitions concerning telegraph transmission quality
12/IX	Statistical multiplexers
13/IX	Code- and speed-independent TDM systems
14/IX*	Code- and speed-dependent TDM systems
15/IX	Low-level telegraph transmission on subscriber lines
16/IX	Further standardization of signalling systems
17/IX	Integration of the telex and gentex networks with other networks that use common channel signalling
18/IX	Use of data networks in the international telex service
19/IX	Technical aspects of the automatic message switching service
20/IX*	Technical aspects of the store and forward service for telex subscribers
21/IX*	Various telex network facilities to be provided in real time
22/IX	Interworking between new information services and telex
23/IX	Automated calling and answering in the telex network
24/IX	The not-ready condition in telex terminal equipment
25/IX	Interruption of teleprinters transmitting automatically
26/IX	Transmission standards of terminal equipment using IA No. 5

STUDY GROUP XI

Question	Short title
1/XI	Structure and use of common channel signalling networks
2/XI	Common channel Signalling System No. 7 – Message transfer part
3/XI	Common channel Signalling System No. 7 – Telephone application
4/XI	Signalling System No. 7 – User part(s) for transfer of information relating to operation, maintenance and administration and for other potential users
5/XI	Interworking of signalling systems
6/XI	Interworking with land mobile and maritime mobile telephone systems
7/XI	Improvements and extensions to SDL Recommendations
8/XI	Maintenance, training, compliance and environments aspects of CHILL
9/XI	Improvements and extensions to MML Recommendations
10/XI	Automatic switching equipment for use in national networks
11/XI	Digital transit switching
12/XI*	Digital local switching
13/XI*	Signalling for digital access to digital local exchanges
14/XI	Technical arrangements for monitoring, collection and generation of maintenance and operational information for common channel signalling systems
15/XI	Signalling on analogue international leased circuits
16/XI	Electrical characteristics of tones
17/XI	Definitions for switching and signalling in the telephone network
18/XI	Signalling for satellite circuits
19/XI	Updating of series Q Recommendations

STUDY GROUP XII

Question	Short title
1/XII	Future programme of work
2/XII	Assessment of service transmission quality
3/XII	Loudness ratings of operators' telephone systems and handsets
4/XII	Effect of circuit noise on transmission performance
5/XII	Talker and listener echo effects
6/XII	Subscribers' tolerance of echo and propagation time
7/XII	Models for predicting transmission quality from objective measurements
8/XII	Measuring the efficiency of a microphoner or a receiver
9/XII	Sidetone
10/XII	Desirable transmission characteristics of handset telephones
11/XII	Transmission degradation introduced by echo control and other voice operated devices
12/XII	Artificial voices, mouths and ears
13/XII	Nonlinear distortion of telephone apparatus
14/XII	Characteristics and effects of attenuation distortion
15/XII	Measurement of loudness ratings
16/XII	Return loss variations in subscriber lines and telephones sets
17/XII	Loudspeaker telephones
18/XII	Transmission performance of digital systems
19/XII	Recommended values of loudness ratings
20/XII	Devices for protection against acoustic shocks
21/XII	Efficiency of telephone kiosks and booths
22/XII	Syllabic companders
23/XII	Coupling of hearing aids to telephone receivers
24/XII	Links with mobile stations
25/XII	Drafting of a handbook on voice-ear measurements

STUDY GROUP XV

Question	Short title
1/XV	Sound programme transmission
2/XV	Equipment for digital transmission of sound-programme signals
3/XV	Harmonization of Recommendations in Volume III
4/XV	Visual telephone service
5/XV	Updating of Recommendations relating to coaxial pairs
6/XV	Revision of Recommendations relating to symmetric pairs with a view to digital transmission
7/XV	Distribution cables for wideband telecommunication signals
8/XV*	Return loss at the input and output of modulators
9/XV	Syllabic companders
10/XV	Echo suppressor improvements, echo canceller specifications and testing methods
11/XV	Unwanted modulation and phase jitter on signals
12/XV	Interference from external sources to transmission systems and equipments
13/XV	Characteristics of optical fibre cables
14/XV	Methods of measuring the characteristics of optical fibre cables
15/XV	Collection and updating of information relating to optical fibre telecommunications
16/XV	Characteristics for digital line systems on metallic-pair cables
17/XV	Characteristics for digital line systems on optical fibre cables
18/XV	Encoding/decoding of FDM groups, supergroups, etc.
19/XV*	Digital line systems provided by FDM transmission bearers
20/XV*	Analogue television transmission
21/XV*	Use of a quinary group
22/XV*	Analogue systems with more than 10,800 channels on 2.6/9.5 mm coaxial pairs
23/XV*	Performance of transmultiplexers
24/XV	Characteristics of transmultiplexing equipments
25/XV	Unification of the characteristics of telephone-type circuits used for transmission (date, telegraph, facsimile, etc.)
26/XV	Leased group links for telephone uses
27/XV	Signal power over the band on a telephone-type circuit
28/XV	Characteristics of group, supergroup, mastergroup and supermastergroup links and links on sets of 15-supergroup assemblies for the transmission of wide-spectrum signals
29/XV	Terminology for transmission systems
30/XV	Equipment for high-capacity submarine cable systems
31/XV	Submarine cables
32/XV	Definitions of reliability and availability of transmission systems and translating equipments and the corresponding availability objectives
33/XV	Analogue multiplexer for telephone transmission
34/XV	Analogue systems on coaxial pair or symmetric pair cables

STUDY GROUP XVI

Question	Short title
1/XVI	Transmission impairments in the evolving network
2/XVI	Characteristics of leaded circuits
3/XVI	Use of compandors in international connections
4/XVI	Transmission aspects of unbalance about earth
5/XVI	Transmission plan aspects of the evolving network
6/XVI	Transmission aspects of telephone conference calls
7/XVI	Revision of the Manual on Transmission Planning of Switched Telephone Networks
8/XVI	Consequences of the modification of the four noise clauses in Recommendation G.222
9/XVI	Echo, propagation time and stability in telephone connections

STUDY GROUP XVII

Question	Short title
1/XVII	Supplement to the vocabulary for data transmission
2/XVII	Measurement on telephone-type circuits used for data transmission systems between subscribers
3/XVII*	Modems for data signalling rates at and above 2400 bit/s on the general switched telephone network
4/XVII*	Modems for data signalling rates at and above 2400 bit/s on telephone-type leased circuits
6/XVII	Study of parallel data transmission systems using the push-button telephone signalling frequencies
8/XVII	Specification of characteristics of circuit leased for data transmission; measuring techniques to check these characteristics
9/XVII	Maintenance/Tests facilities
10/XVII	Data transmission over 48 kHz and 240 kHz circuits
11/XVII	Data transmission on digital facilities and in digital network
12/XVII	Comparative tests of data communication equipment for use over telephone-type circuits and local subscriber lines
13/XVII*	Interchange circuits
15/XVII	Data transmission over intercontinental switched telephone-type connections
16/XVII*	Duplex modems
17/XVII	Tests for modems on wideband circuits
18/XVII	Revision of the existing Series V Recommendations
19/XVII	Power levels for data transmission over telephone-type circuits
21/XVII	Data communication equipment for local subscriber lines
22/XVII*	Digital performance of data transmission services over the telephone network using V-series modems
23/XVII	Double dialling
24/XVII	Transmission of "teletyping" over the telephone network

STUDY GROUP XVIII

Question	Short title
1/XVIII*	General network aspects of an Integrated Services Digital Network (ISDN)
2/XVIII	Customer/network interface
3/XVIII	Synchronization in digital networks
4/XVIII*	Signalling for the ISDN
5/XVIII*	Switching for the ISDN
6/XVIII	Definition for digital networks
7/XVIII	Encoding of speech and voice-band signals using methods other than PCM, in accordance with Recommendation G.711
8/XVIII	Digital speech interpolation system
9/XVIII*	General network performance aspects of integrated digital networks
10/XVIII*	Availability for the ISDN
11/XVIII	Characteristics for digital sections
12/XVIII	Maintenance philosophy of the digital network
13/XVIII	Implementation of maintenance philosophy
14/XVIII*	Interworking between digital systems based on different standards
15/XVIII	Interfaces in digital networks
16/XVIII	Performance characteristics of PCM channels at audio frequencies
17/XVIII	Characteristics of PCM multiplexing equipment and other terminal equipments for voice frequencies
18/XVIII	Characteristics of digital multiplex equipment and multiplexing arrangements for telephony and other signals
19/XVIII	Networks aspects of existing and new levels in the digital hierarchy

JOINT CCITT/CCIR STUDY GROUP CMBD

Question	Short title
1/CMBD	Measurements on actual loading
2/CMBD	General studies concerning availability and reliability
3/CMBD	Measurement of the usable power margin of wideband amplifiers and transmission systems
4/CMBD	Mathematical models for load calculations including non-speech signals
5/CMBD	Control of actual loading of FDM systems including non-speech signals
6/CMBD	Availability and reliability of local networks
7/CMBD	Hypothetical reference circuits and associated noise objectives
8/CMBD	Availability of telecommunication services
9/CMBD	Reliability of telecommunication services, once established
10/CMBD	Allocation of the availability and reliability objectives
11/CMBD	Improvement of Recommendations on noise measurements
12/CMBD	Consequences of the modification of the four noise clauses in Recommendation G.222

JOINT WORKING PARTY LTG

Question	Short title
1/LTG	Unification of the characteristics of telephone-type circuits used for transmission
2/LTG	Leased group links for telephone uses
3/LTG	Signal power over the band on a telephone-type circuit
4/LTG	Characteristics of group, supergroup, mastergroup and supermastergroup links and links on sets of 15-supergroup assemblies for the transmission of wide-spectrum signals

JOINT WORKING PARTY SMM

Question	Short title
1/SMM	Operational aspects of future developments in the Maritime Mobile Service
2/SMM	Revision of Recommendations concerning Public Correspondence in the Maritime Mobile Service
3/SMM	Charging and accounting aspects of future developments in the Maritime Mobile Service

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PART IV

SERIES A RECOMMENDATIONS

Organization of the work of the CCITT

SERIES B RECOMMENDATIONS

Means of expression

SERIES C RECOMMENDATIONS

General telecommunication statistics

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SERIES A RECOMMENDATIONS

Organization of the work of the CCITT

(See also Resolutions)

<i>Recommendation No.</i>	<i>Title</i>
A.10	Terms and definitions.
A.12	Collaboration with the International Electrotechnical Commission on the subject of definitions for telecommunications.
A.13	Collaboration with the International Electrotechnical Commission on graphical symbols and diagrams used in telecommunications.
A.14	Publication of definitions.
A.15	Presentation of CCITT Texts.
A.16	Presentation of texts on terminology.
A.17	Collaboration concerning maintenance considerations for new systems.
A.20	Collaboration with other international organizations over data transmission.
A.21	Collaboration with other international organizations on CCITT defined telematic services.

Recommendations A.10, A.12 and A.14 deal with CCITT activities in the field of terminology.

The work of CCITT in technical terminology is aimed at unambiguous understanding of the Recommendations and Associated Regulations, etc.

The CMV performs a coordinating role on behalf of both CCI's and maintains liaison with the IEC/CCI Joint Coordination Group.

Recommendation A.10

TERMS AND DEFINITIONS

(New Delhi, 1960; Geneva, 1964; Geneva, 1972; Geneva, 1980)

The CCITT,

considering

(a) that it is essential for the work of the ITU and in particular of the CCIs and for liaison with other interested organizations that terms and their definitions be standardized as far as possible;

(b) that the organization and conduct of vocabulary work have been the subject of certain CCI Plenary Assembly texts;

(c) that the CCIs are collaborating with the International Electrotechnical Commission (IEC) (Technical Committee No. 1) in order to provide an internationally agreed vocabulary of telecommunication terms and that for this purpose a Joint Coordination Group (JCG) has been established. The Joint Coordination Group is composed of twelve members and the CCIs (represented by equal numbers of members of the CCIR and CCITT) are represented on an equal footing with the International Electrotechnical Commission, the Chairman being chosen from among the members of the CCIs, the Secretary being chosen from among the members of the International Electrotechnical Commission which also provides the Secretariat. The Joint Coordination Group has set up joint working groups of experts to collaborate in drafting the telecommunication chapters of the International Electrotechnical Vocabulary (IEV);

(d) that the ITU does not intend to re-issue, in its original form, Part I of the ITU List of Definitions of Essential Telecommunication Terms and that Part II of the List, relating to radiocommunication, will not be prepared;

(e) that the CCIs have published certain terms with their definitions in the respective Plenary Assembly Books and that there is a continuing need for the publication of terms and definitions appropriate to the work of particular Study Groups;

- (f) that unnecessary or duplicated work can be avoided by effective coordination of all work on vocabulary carried out by the CCI Study Groups;
- (g) that the IEC has already published documents pertaining to telecommunication terms;
- (h) that the long-term objective of this vocabulary work must be the preparation of a comprehensive vocabulary in the three working languages of the ITU,

recommends

(1) that the CCIs, within their terms of reference, should continue their work on technical and operational terms and definitions which may be required for regulatory or administrative purposes and also on specialized terms and definitions required by Study Groups in the course of their work, these terms and definitions being published as appropriate by the CCIs;

(2) that to facilitate appropriate publication Study Group texts should assemble and present terms in logical order, families of related terms being grouped in separate Recommendations, insofar as practicable;

(3) that Study Groups should endeavour to make the maximum use of terms and definitions already published in documents such as those of other CCI Study Groups or the International Electrotechnical Commission, and that proposals for the revision or different application of any such terms considered to require amendment should be forwarded to the CMV with supporting justification;

(4) that each CCI Study Group should be requested to constitute a small permanent working group on terminology headed by a Special Rapporteur. Recommended terms of reference and working methods for these working groups are given in Annex A;

Note – For some Study Groups it may only be necessary to nominate the Special Rapporteur;

(5) that the CCIs and particularly their Study Groups should continue their cooperation in the work of the Joint Coordination Group and its vocabulary working groups and that the necessary coordination should be assured by the CMV;

(6) that for general technological terminology, the member Administrations and recognized private operating agencies of the CCIs should make use of the terms and definitions agreed upon by the CCIs and published in the revised telecommunication chapters of the International Electrotechnical Vocabulary¹⁾;

(7) that in order to avoid multiple definitions and duplication of work proposed terms and definitions considered to be of interest to a number of Study Groups should be forwarded by the Special Rapporteurs for terminology to the CMV for coordination and eventual publication.

ANNEX A (to Recommendation A.10)

Recommended terms of reference and working methods for terminology working groups in CCI Study Groups

Preamble

It is assumed that each CCI Study Group has constituted a small permanent working group on terminology headed by a "Special Rapporteur".

A.1 Terms of reference

A.1.1 The working group on terminology (wgt) studies terminology matters referred to it by:

- Working Parties of the same Study Group,
- the Study Group as a whole,
- the Chairman of the Study Group,
- a Special Rapporteur for terminology of another CCI Study Group, or by
- the CMV.

A.1.2 The objective of the studies is to achieve full agreement on finalized terms and definitions, in the three working languages of the ITU. Agreement by the working group on terminology should be confirmed by the Study Group as a whole.

¹⁾ This applies to terms and definitions approved by CCI Study Groups, which should be identified in the IEV.

A.1.3 The Special Rapporteur is responsible for coordination of terminology within his own Study Group and with other Study Groups. He also represents his Study Group in CMV/1.

A.1.4 The Special Rapporteur has the responsibility for liaison between his Study Group and CMV/1 in respect of the joint CCI/IEC vocabulary activities and where necessary takes decisions in these matters of terminology on behalf of his Group.²⁾

A.2 : *Working methods for cooperation between CCI Study Groups*

A.2.1 The wgt works by correspondence, augmented by meetings which usually occur at Study Group meetings.

A.2.2 Membership of wgt should include three technical language specialists, one each for English, French and Spanish usage.

A.2.3 A list of items accepted for study by the Special Rapporteur should be published as a contribution of the Study Group.

A.2.4 All new terms and definitions agreed upon by a Study Group will normally be contained in a Report or Recommendation of the Study Group (CCIR) or in a separate section of the Report of the Study Group meeting (CCITT).

A.2.5 Terms and definitions agreed upon by the working group will be published as Study Group contributions by the relevant CCI Secretariat, which will transmit them to the Special Rapporteurs (IWP CMV/1) and to CMV Chairman and Vice-Chairmen for coordination.

A.2.6 Overlap or conflict among CCI Study Groups concerning terms or definitions should be resolved as far as possible through cooperative work within IWP CMV/1 between the appropriate CCI Special Rapporteurs on Terminology with the assistance as required of experts of the Study Groups concerned.

A.2.7 Graphic illustrations may be used as an integral part of the definitions.

A.2.8 Periodically the CCI Secretariats should prepare for publication up-to-date lists of terms and definitions which have been agreed by CCI Study Groups for information.

A.3 *Working methods for the JCG vocabulary activities*

A.3.1 The Special Rapporteur receives vocabulary drafts (in the form of IEC Secretariat documents) prepared by the JCG groups of experts, examines them and decides whether they should be circulated further, for example, to the members of his working group or Study Group.

A.3.2 The Special Rapporteur prepares a unified reply to the CMV Secretariat.

A.3.3 The Special Rapporteur receives the final drafts on vocabulary and indicates approval or disapproval of those terms and their definitions which are of concern to his particular Study Group.

APPENDIX I (to Recommendation A.10)

DECISION 19-1

TERMS AND DEFINITIONS

(1974-1978)

The CCIR/CCITT Joint Study Group for Vocabulary (CMV),

considering

(a) that, according to Resolution 66, each CCITT or CCIR Study Group establishes a small working group on terminology headed by a "Special Rapporteur for Terminology";

²⁾ The Special Rapporteur shall consult his Study Group before taking any decision in relation with the terminology work of the Study Group.

(b) that the CMV has to coordinate the work of these CCI working groups on terminology and to ensure cooperation with the CCI/IEC Joint Coordination Group (JCG) and its groups of experts,

decides

- 1 that, in order to fulfil effectively its coordination and cooperation functions, the CMV shall maintain Interim Working Party CMV/1 on a permanent basis;
- 2 that the composition of Working Party CMV/1 shall be:
 - the “Special Rapporteurs” appointed by the respective Chairmen of the Study Groups of the CCIs, one Special Rapporteur for each Study Group, according to Resolution 66;
 - the “national collaborators”, not more than one from each Administration which decides to actively participate in the work of Working Party CMV/1 (see Annex 1 of this appendix);
- 3 that the objective of Working Party CMV/1 should be:
 - to act as overall coordinator of special terms and definitions prepared by the Study Groups of the CCIs, especially by ensuring that definitions prepared by each Study Group are circulated to all Special Rapporteurs for vocabulary;
 - to achieve full agreement of the CCIs in drafts prepared by the groups of experts of the JCG;
- 4 that in order to ensure the publication of “Telecommunication” chapters of the IEV in a reasonable time, Working Party CMV/1 shall be empowered to take decisions regarding the provisional approval for publication of the IEC of the terms and definitions prepared by the groups of experts of the JCG.

ANNEX 1 (of Appendix I)

Composition of WP CMV/1

Chairman: Mr. M. Thué, Chairman of the CMV

Members: (a) Special Rapporteurs for terminology of all CCI Study Groups.
 (b) National collaborators representing the following Administrations:

- France
- United Kingdom
- Spain

Recommendation A.12

COLLABORATION WITH THE INTERNATIONAL ELECTROTECHNICAL COMMISSION ON THE SUBJECT OF DEFINITIONS FOR TELECOMMUNICATIONS

(Geneva, 1964; amended at Mar del Plata, 1968, and Geneva, 1972)

The CCITT,

unanimously recommends

that in order to provide an internationally agreed vocabulary of telecommunications, the CCITT should cooperate with the CCIR and the International Electrotechnical Commission for the purpose of preparing those sections concerned with telecommunications in a new edition of the International Electrotechnical Vocabulary.

It is understood that for this purpose there shall be established:

- a joint coordination group composed of members of the IEC and of the ITU;
- a number of groups of technical experts to be set up by the joint coordination group to prepare the drafts of the various sections of the *Telecommunications vocabulary*.

It is furthermore understood that the joint coordination group will be composed of twelve members and that the ITU (itself represented by equal numbers of members of the CCIR and CCITT) will be represented on an equal footing with the IEC. In the joint coordination group:

- the Chairman will be chosen from among members of the ITU (CCITT and CCIR);
- the Secretary will be chosen from among members of the IEC which will also provide the Secretariat.

Recommendation A.13¹⁾

**COLLABORATION WITH THE INTERNATIONAL ELECTROTECHNICAL COMMISSION
ON GRAPHICAL SYMBOLS AND DIAGRAMS USED IN TELECOMMUNICATIONS**

(New Delhi, 1960; amended at Geneva, 1964, Mar del Plata, 1968, Geneva, 1972 and Geneva, 1980)

The CCITT,

recommends

that the CCIs should continue to cooperate in the work of the CCI/IEC Joint Working Group which has been set up to prepare, for international telecommunications:

- an approved list of graphical symbols for diagrams and for use on equipment;
- approved rules for the preparation of diagrams, charts and tables and for item designation;

it being understood that

- (a) within the Joint Working Group, the ITU (represented by equal numbers of members from the CCIR and CCITT) is represented on an equal footing with the IEC;
- (b) the Joint Working Group, while being fully representative, is as small as possible to be able to work effectively and quickly;
- (c) CCI members of the Joint Working Group are empowered to take decisions on questions relating to symbols and the rules referred to above, so that the publication of an approved list does not have to await formal approval by a following Plenary Assembly of the CCITT or CCIR.

Recommendation A.14

PUBLICATION OF DEFINITIONS

(Mar del Plata, 1968; Geneva, 1972, 1980)

The CCITT,

considering

- (a) that revision and re-edition of a complete list of definitions cannot be done very frequently, in view of the volume of work involved;
- (b) that rapid developments in telecommunications lead to constant change in the terms used and that it is desirable to publish approved terms and definitions with the minimum possible delay, even though these terms and definitions have not been examined to see how they fit into the complete system of terms and definitions for telecommunications;
- (c) that it may be appropriate to be aware of the definitions developed by other international organizations participating in the work of the CCITT,

unanimously recommends

that after each Plenary Assembly the CCITT Secretariat should gather the terms and definitions proposed by each Study Group and approved by the Plenary Assembly. These terms and definitions should be allocated to their Recommendation Series and published in the appropriate fascicles of the CCITT Book. In addition they should be assembled and published in the fascicle "Terms and Definitions".

The terms and definitions shall be given only in the languages of the CCITT Book.

¹⁾ A similar text will be submitted to CCIR as a revision of Resolution 23-1.

Recommendation A.15**PRESENTATION OF CCITT TEXTS***(Geneva, 1980)*

The CCITT,

considering

- (a) that continuous effort must be expended to avoid unnecessary complication in CCITT documents and published material;
- (b) that adoption of an acceptable method of text presentation simplifies work procedures;
- (c) that a logical system of paragraph numbering facilitates the work of delegates, interpreters and others using texts in more than one language;
- (d) that electronic storage and manipulation of text is facilitated by standardized text formats;

recommends

- (1) that a system providing for the logical, hierarchical numbering and standardized layout of texts be applied to all CCITT texts;
- (2) that due consideration be given in the application of such a system to both the needs of the user and the exigencies of electronic storage and treatment of text (see Appendix I).

Not all text passages need necessarily be numbered (among other reasons, for aesthetic considerations). In this regard, however, due consideration must be given to the requirements of both the individual reader and the interpreter during Study Group meetings.

The recommended numbering system, as illustrated below, was designed to apply primarily to the content of a CCITT Recommendation but may be applied generally to a chapter of a CCITT manual or to other texts.

The system must be adaptable to the content of texts structured as follows:

- introductory part;
- main divisions;
- subdivisions;
- annexes;
- appendices;
- references;
- bibliographies.

Note 1 – Texts do not necessarily contain an introductory part, annexes, appendices, references or bibliographies.

Note 2 – A *supplement* is considered as a separate document which is associated with a Recommendation Series of the CCITT.

Note 3 – The definitions of “Annex” and “Appendix” are similar and some Study Groups use both in publishing the results of their work. While not indispensable, it would be helpful if some distinction could be made between the two, leading to a standard approach to their application. The following descriptions are provided for this purpose.

Annex: An annex to a document should contain material which contributes substantially to the overall comprehensibility and completeness of the document.

Appendix: An appendix to a document should contain material which is supplementary and is associated with, but separate from, the subject matter of the document and is not essential to its completeness or comprehensibility.

1 Numbering of the divisions of text

1.1 Numbering of the introductory part

Numbers beginning with the digit 0 may be assigned to the introductory part of the text for information retrieval purposes.

The numbering is with Arabic numerals (they are suppressed when published).

1.2 *Numbering of the main divisions*

The main divisions are numbered continuously beginning with the digit 1 (a number without a separation point).

The numbering is with Arabic numerals (boldface when published).

1.3 *Numbering of the subdivisions of the main divisions*

The subdivisions of the main divisions are numbered, for example, 1.1, 1.2, 2.1.1, 2.3.4 (several numbers separated by points).

The numbering is with Arabic numerals.

Note – When reference is made to numbered text passages, the symbol § is used (see § 8.1).

1.4 *Numbering of annexes*

Annexes are assigned capital letters beginning with A. The word and the letter, for example “ANNEX A”, are in capitals, Roman, and centred horizontally.

Divisions of an annex are numbered by Arabic numerals following the letter of the annex, e.g. A.1, B.2.1.

1.5 *Numbering of Appendices*

Appendices are assigned Roman numbers beginning with the number I. In the title of an appendix, the word is in Roman capitals, thus “APPENDIX IV”, and centred horizontally. Divisions of an appendix are numbered by Arabic numerals following the number of the appendix, e.g. I.2, IV.3.4.

1.6 A point is placed only between the numbers (or between the letter and the number) designating subdivisions of different levels.

Note – A point is not used after the last digit of the number.

2 **Titles**

2.1 The text of the title (CCITT Recommendation, chapter or section of a CCITT manual) is in capitals (boldface when published) and is centred horizontally.

2.2 The text of the title of a main division is in lowercase (boldface when published). The text is indented with respect to the margin.

2.3 The text of the title of an annex or appendix is in lowercase (boldface when published). The text is centred horizontally below the word “ANNEX” or “APPENDIX” and its associated letter of the annex (see §§ 1.4 and 1.5).

2.4 The texts of the titles of the subdivisions of: a) the introductory part, b) the main divisions and c) the annexes and appendices are in lowercase and underlined (italics when published). They are indented with respect to the margin.

3 **Text passages**

Text passages begin with an indent with respect to the margin with the following lines aligned at the margin. The numbers assigned to the text passages are placed at the margin.

4 **Notes associated with the main text**

4.1 *Notes in the main text*

The word “Note” followed by the text begins with an indent with respect to the margin with the following lines aligned at the margin.

Note – The word “Note” is underlined (italics when published) and followed by a space, a dash, a space and then the text. Several notes together are assigned consecutive numbers (e.g. *Note 1 –*).

If the Note contains more than one paragraph, each succeeding paragraph begins at the margin.

4.2 *Footnotes to the main text*

A footnote is referred to from the main text through the use of a superior positioned number followed by a superior positioned parenthesis, thus ¹⁾.

¹⁾ The text of a footnote is preceded by an Arabic number followed by a parenthesis (superior positioned characters) and a space. The lines of the text are aligned with respect to the beginning of the first line of text.

Footnotes are numbered consecutively within a CCITT Recommendation or generally within a chapter of a CCITT manual.

5 Enumerations

5.1 First level enumerations

Each item in a first level enumeration may be presented thus:

- a) a lowercase Roman letter followed by a parenthesis, several character spaces and the text of the item or
- 1) an Arabic number followed by a parenthesis, several character spaces and the text of the item or
- i) a lowercase Roman number followed by a parenthesis, several character spaces and the text of the item or
- a dash followed by several character spaces and the text of the item.

Note 1 – The lines of the text are aligned with respect to the beginning of the text of the item.

Note 2 – If there are several text passages under a given item, the beginning of each text passage is aligned with respect to the beginning of the first text passage.

Note 3 – A note associated with an item, including the underlined word “Note” (italics when published), is aligned with respect to the beginning of the text of the item.

Note – A note associated with all the enumerated items, including the underlined word “Note” (italics when published), is aligned with respect to the letters, numbers or dashes, which are indented with respect to the margin.

5.2 Second level enumerations

Second level enumerations are similar to first level enumerations. They may, for example, be presented thus:

- a) use of a lowercase letter followed by a parenthesis and several character spaces at the first level and
 - 1) use of an Arabic number followed by a parenthesis and several character spaces at the second level or
 - i) use of a lowercase Roman number followed by a parenthesis and several character spaces at the second level or
 - use of a dash and several character spaces at the second level or
- 1) use of an Arabic number followed by a parenthesis and several character spaces at the first level and
 - use of a dash and several character spaces at the second level or
- i) use of a lowercase Roman number followed by a parenthesis and several character spaces at the first level and
 - use of a dash and several character spaces at the second level.

Note 1 – Alignment of several text passages in second level enumerations is similar to the alignment of text passages in first level enumerations as described in § 5.1.

Note 2 – The presentation of the notes in second level enumerations is similar to the presentation of the notes in first level enumerations as described in § 5.1.

5.3 Titles in enumerations

The titles of the enumerated items are written in lowercase letters and underlined (italics when published). They are not numbered but are indented with respect to the margin. The different cases may be presented thus:

Example 1

In this example the text of the enumerated item is aligned with the beginning of the title.

Example 2 – In this example the title is followed by a space, a dash, a space and the text of the enumerated item. The following lines of text are aligned with the beginning of the title.

Example 3

- 1) In this example the title is followed by a first level enumeration (see § 5.1).
 - The first level enumeration can be followed by a second level enumeration (see § 5.2).

a) *Example 4*

In this example the title is indented with respect to the letter or number and the text is aligned with the beginning of the title.

b) *Example 5* – In this example the title is indented with respect to the letter or number, and is followed by a space, a dash, a space and the text of the enumerated item. The following lines of text are aligned with the beginning of the title.

c) *Example 6*

- In this example the title is indented with respect to the letter or number and is followed by a second level enumeration (see § 5.2).

6 Tables and figures

6.1 Numbering of tables and figures

Tables and figures are numbered with reference to the main division, the annex or the appendix of the text. They are identified by the words “TABLE” and “FIGURE” respectively in association with an assigned number as described in Table 1/A.15.

6.2 Titles of tables and figures

The titles of the tables and figures are in lowercase letters (boldface when published). They are placed below the word “TABLE” or “FIGURE” and centred horizontally (see Table 1/A.15 and Figure 1/A.15).

6.3 The table itself is placed below its title (see Table 1/A.15).

6.4 The figure itself is placed above its number and title (see Figure 1/A.15).

TABLE 1/A.15

Numbering of tables and figures

Designation	Meaning of designation
TABLE 1/W.1001 ^{a)}	First table in Recommendation W.1001
FIGURE 2/W.1001 ^{b)}	Second figure in Recommendation W.1001
TABLE A-3/W.1001	Third table in Annex A of Recommendation W.1001
TABLE II-2/W.1001	Second table in Appendix II of Recommendation W.1001
TABLE 6-4 (VII)	Fourth table in § 6 of Chapter VII of a manual
FIGURE 6-5 (B.II)	Fifth figure in § 6 of Part B, Chapter II of a manual

a) The word “TABLE” is in capital Roman followed by its assigned number.

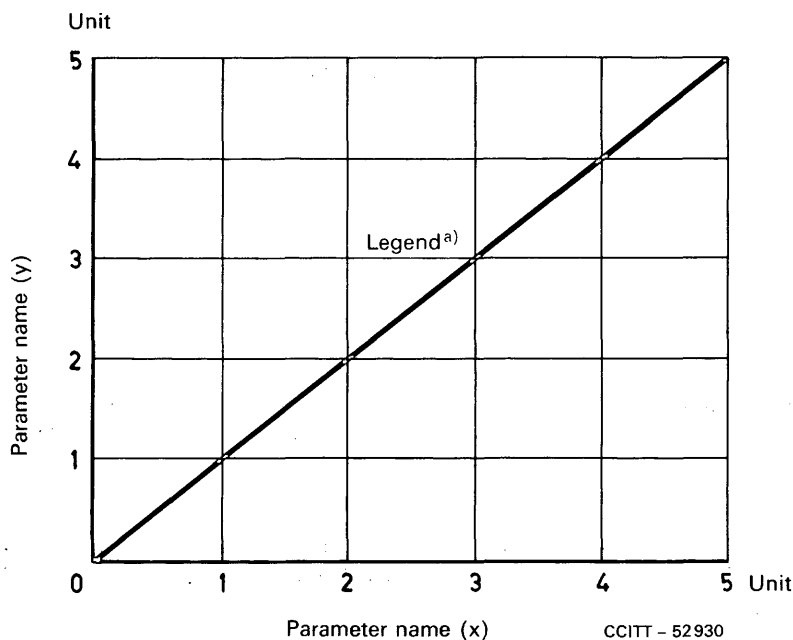
b) The word “FIGURE” is in capital Roman followed by its assigned number.

Note 1 – The words “TABLE” and “FIGURE” in association with their numbers are centred horizontally (see § 6.2).

Note 2 – In order to avoid confusing the footnotes to the text with those to tables or figures the footnotes to the tables or figures will be indicated by a superior positioned *letter*, followed by a superior positioned parenthesis.

6.5 Notes associated with tables or figures

6.5.1 In the case of tables, the notes are placed below the table. In the case of figures, the notes are placed between the figure and the number and title of the figure. The notes are aligned at an appropriate indent with respect to the margin or with respect to the table or figure.



^{a)} Explanatory comments are placed immediately below the figure.

Note – General notes to the figure are placed above the number and title of the figure (see § 6.5.1).

FIGURE 1/A.15
Presentation of notes associated with figures

6.5.1.1 In the case of a general note to the table or figure (a note not referred to from the table or figure), the text of the note is preceded by the underlined word “*Note*” (italics when published). Several notes together are assigned consecutive numbers (e.g. *Note 1* –).

6.5.1.2 In the case of a note referred to from a table or figure, the note is referred to through the use of a superior positioned letter followed by a superior positioned parenthesis in the table or figure. The text of the note is preceded by the same superior positioned letter followed by a superior positioned parenthesis and a space.

7 Formulas

7.1 Formulas are numbered with reference to the main division or the annex of the text. They are centred horizontally and are identified by an assigned number placed at the right margin illustrated as follows:

“Centred formula” (7-1)
“Centred formula” (A-2)

where

(7-1) is the first formula in § 7

(A-2) is the second formula in Annex A

7.2 Listings of symbols and variables are aligned at an indent with respect to the margin. Explanations of the symbols and variables are indented with respect to the symbols or variables (see § 7.1).

8 References, bibliographies

8.1 Reference to other divisions or subdivisions

The sign “§” is used to refer to a numbered text passage of the same Recommendation or of the same chapter of a CCITT manual, e.g. “see § 2”, or “as indicated in § 3”. In the case of a manual, the sign “§” can be accompanied by the designation of the part or the chapter in which the cited passage is found, if it is outside of the present chapter, e.g. “see Chapter II, § 5”.

8.2 List of specific references

Reference numbers within square brackets (e.g. “[3]”, signifying: see the third reference) are used when the text is referencing a passage (or the contents) of *another* Recommendation, or of *another* manual, publication, article in a journal, etc.

The number of a Recommendation may be cited in the text but it must be accompanied by a reference number within square brackets which allows a more complete description of the reference.

Specific references are numbered consecutively within a Recommendation or chapter of a manual, assigning the number 1 to the first reference.

A list of the specific references is placed at the end of the Recommendation²⁾ (annexes and appendices included) but before the bibliography (if there is one). The reference numbers are Arabic numerals within square brackets and aligned at the margin. The text of the reference is indented with respect to the margin as illustrated in the three examples [1] to [3].

8.3 Bibliography

The elements of the bibliography are placed at the end of the Recommendation³⁾, or for a manual at the end of the thematic subdivision to which it relates. The word “Bibliography” appears as a non-numbered title in lowercase (boldface when published). The text of the elements of the bibliography is aligned at the margin. The elements are in alphabetical order.

They contain the following information, in the given order:

- a) *Name of the author(s)* – The name(s) are written in capitals, Roman, followed by the initial(s) of the first name(s) in capitals, Roman with point(s) after, and placed within parentheses.
- b) *Title of the publication* – written in lowercase, Roman.
- c) *Source of the publication* – written in lowercase, underlined (italics when published).
- d) Information concerning the volume, number, page, location, month and year are written in lowercase, Roman.

Note – When the author of a publication is not indicated, the underlined title (italics when published) is placed first and the source is then put in lowercase, Roman.

²⁾ For manuals, at the end of a chapter or at the end of the manual, as desired.

³⁾ If the Recommendation contains one or several annexes or appendices together with bibliographies, one can differentiate between the titles of the bibliographies: bibliography relating to the text of the Recommendation, bibliography relating to Annex A, etc.

(to Recommendation A.15)

				First line							Following lines							
	boldface	italic	normal	left margin	special TAB	TAB 1	TAB 2	TAB 3	fixed space	centred	right margin	left margin	special TAB	TAB 1	TAB 2	TAB 3	fixed space	centred
<i>Numbers and letters (main text)</i>																		
- 1, 2, 3, etc.	x			x														
- 0, 0.1, 0.1.2, etc.			x	x														
- 1.2, 1.2.3, 1.2.3.4, A.1, A.1.2, etc.			x	x														
- (a), (l)			x			x												
<i>Titles (main text)</i>																		
- title of documentation	x									x								x
- title following 1, 2, 3, etc.	x					x								x				
- title following 1.1, 1.2, 1.2.3, A.1		x				x								x				
- title following 1.2.3.4, etc.																		
- "ANNEX A" or "APPENDIX I"			x						x	x							x	
- title of an annex or an appendix	x									x								x
<i>Text passages</i>																		
- text following 1, 1.2, 1.2.3				x		x						x						
- text following 1.2.3.4, etc.				x					x			x						
- text following (a), (l)				x			x					x						
- unnumbered text passages				x		x						x						
<i>Notes (main text)</i>																		
- "Note", "Note 1"		x				x												
- text following "Note" or "Note 1"				x								x						
- "(l)" of footnote				x	x				x									
- text of footnote following "(l)"				x		x							x					
<i>Enumerations</i>																		
- titles		x				*	*							*	*			
- text under the title				x		*	*							*	*			
- a), -, l), i)				x		*	*							*	*			
- text following a), -, l), i)				x		*	*	*						*	*	*		
- "Note"		x				*	*	*						*	*	*		
- text following "Note"				x					x					*	*	*		
* TAB fixed according to type and level (see the examples of § 5)																		
<i>Tables and figures</i>																		
- "TABLES 1/W.1001, "FIGURE 2/W.1001"				x							x							
- titles of tables and figures	x										x							x
<i>Formulas</i>																		
- number of formula "(2-1)"				x							x							
- formula																		
- listing of symbols and variables						x					x							
- explanations of symbols and variables				x			x											
<i>References</i>																		
- title	x					x												
- reference number "[3]"				x	x													
- text following "[3]"						x								x				

APPENDIX I
(to Recommendation A.15)

TREATMENT OF MACHINE READABLE TEXTS

I.1 While CCITT receives material for documents and publications almost exclusively in written form, it is expected that more frequently in the future, Administrations and others will wish to submit text in machine readable form. As the presentation rules are an accepted standard within CCITT and the ITU General Secretariat, it would be advantageous if the originator of any such machine readable text would use the rules in preparing this material. In addition, there are certain other standards used in ITU concerning line length, use of underline, density of characters, etc., that could be supplied on request, by the Computer Department and which could help text originators avoid submitting material that needs extensive "translation" to make it compatible. The medium most acceptable to the ITU Computer Department is standard magnetic tape with 800 or 1600 bytes per inch (IBM format). Flexible (or floppy) disks, eight inch, single side, single density (IBM format) are also acceptable.

References

- [1] CCITT manual *Title of manual*, Part A, Chapter II, §1.2, ITU, Geneva 1972.
- [2] CCITT Recommendation *Title of the Recommendation*, Coloured Book, Vol. XII, Rec. W.1002, Division A, §1.2, ITU, Geneva 1977.
- [3] NAME (F.), NAME (F.): Title of publication, *Source of publication*, Vol. 14, No. 2, pp. 250-270, Paris 1970.

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NAME (F.), NAME (F.): Title of publication, *Source of publication*, Vol. 15, No. 3, pp. 270-280, Madrid 1971.
Title of publication, Source of publication, Part A, Chapter V, pp. 280-290, Montreal 1975.

Recommendation A.16

PRESENTATION OF TEXTS ON TERMINOLOGY

(Geneva, 1980)

The CCITT,

considering

- (a) that it is essential that the terminology work done by the CCIs should be widely disseminated, as regards both terms and definitions;
- (b) that users generally have ITU publications at their disposal in one language only but are often required to read or write technical texts in one of the other working languages;
- (c) that texts on vocabulary and glossaries, such as the volume "Terms and Definitions" in the *Orange Book*, are not as a rule directly available to users interested in a particular volume;
- (d) that a terminological supplement to the Plenary Assembly Books does not cover all ITU terminology, nor even that of the publishing CCI, for example, as used in the handbooks,

recommends

- (1) that the texts on vocabulary and the parts of texts dealing specifically with definitions of terms, published by the CCIs in the Books resulting from their Plenary Assemblies, manuals or other publications, shall include the equivalents of all the terms defined in the other working languages of the ITU;
- (2) that the practical means of providing the equivalents of terms in addition to the full text of terms and definitions in one of the languages is left to the discretion of the CCI publishing the text concerned.

ANNEX A

(to Recommendation A.16)

(Extracts from Report 730 of the CCIR)

0.1 Accuracy, Exactitude, Exactitud

Generally equivalent to systematic uncertainty of a measured value. (See also Uncertainty [0.3]).

0.2 Precision, Précision, Precisión

Random uncertainty of a measured value, expressed by the standard deviation or by a multiple of the standard deviation. (See also Uncertainty [0.3]).

0.3 Uncertainty, Incertitude, Incertidumbre

The uncertainty of a measured value expresses the magnitude of a possible deviation of this value from the true value.

Frequently it is possible to distinguish two components, the systematic uncertainty and the random uncertainty.

The random uncertainty is expressed by the standard deviation or by a multiple of the standard deviation. The systematic uncertainty is generally estimated on the basis of the parameter characteristics.

The term “accuracy” is generally equivalent to “systematic uncertainty”, whereas the term “precision” is equivalent to “random uncertainty”. Similarly, the “total” accuracy of a measurement is equivalent to an “overall” uncertainty, comprising both parts, the systematic and the random.

0.4 Error*, Erreur, Error

An unintentional difference: measured value minus true value.

0.5 Frequency instability, Instabilité de fréquence, Inestabilidad de frecuencia

It is expressed by the frequency change within a given time interval τ . Generally one distinguishes between frequency drift effects (see 1.10) and stochastic frequency fluctuations. Special variances have been developed for the characterization of these fluctuations.

0.7 Reproducibility, Reproductibilité, Reproducibilidad

(a) With respect to a set of independent devices of the same design, is the standard deviation of the values produced by these devices.

(b) With respect to a single device put into operation repeatedly, is the standard deviation of the values produced by this device.

0.8 Resetability⁽¹⁾, Défaut de fidélité, Reposicionabilidad

It is the unavoidable deviation between values produced by a device, when specified parameters are independently adjusted under stated condition of use.

Note – It is given by the estimate of the confidence limits (i.e. uncertainty of the observed values).

⁽¹⁾ This term replaces the previous term “repeatability”, considered as not pertinent to frequency generators, but to measuring procedures.

0.9 Calibration*, Etalonnage, Calibración

The process of identifying and measuring errors in instruments and/or procedures.

Note – In many cases, e.g. in a frequency generator, the calibration is related to the stability of the device and therefore its result is a function of time.

0.10 Nominal value*, Valeur nominale, Valor nominal

A specified or intended value independent of any uncertainty in its realization.

Note – In a device, that realizes a physical quantity, it is the value of such a quantity specified by the manufacturer. Since it is an ideal value, it is free from tolerance.

0.11 Offset*, Décalage, Separación

An intentional difference between the realized value and the nominal value. (See also “Normalized offset”).

0.12 Normalized offset, Décalage normé, Separación normalizada

The offset divided by the nominal value.

Note – Often also called relative offset. The term “fractional offset” is to be avoided.

*These definitions differ from those in the IEV, but Study Group 7 is of the opinion that they are more appropriate for the standard-frequency and time-signal service.

ANNEX B
(to Recommendation A.16)
(Extract of CCITT Recommendation G.601)

TERMINOLOGY FOR CABLES
(Geneva, 1980)

1. GENERAL TERMS: REPEATERS, POWER FEEDING, ETC.

1001 repeater

F: répéteur

S: repetidor

An equipment essentially including one or several amplifiers and/or *regenerators*, and associated devices, inserted at a point in a transmission medium.

Note: A repeater may operate in one or both directions of transmission.

1002 analogue repeater

F: répéteur analogique

S: repetidor analógico

A *repeater* for amplifying analogue signals or *digital signals* and capable of other functions, but excluding *regeneration of digital signals*.

1003 regenerative repeater

F: répéteur régénérateur

S: repetidor regenerativo

A *repeater* ensuring *regeneration of digital signals*, and capable of other functions.

Note – This definition is different from that given in Recommendation G.702. At the time when Recommendation G.702 was drafted, a suitable CCITT definition of *repeater* was not available. The ensemble of definitions given here makes it desirable to incorporate the *regenerative repeater* in the family of transmission systems, instead of defining it only as a device, as is the case in Recommendation G.702.

Recommendation A.17

COLLABORATION CONCERNING MAINTENANCE CONSIDERATIONS FOR NEW SYSTEMS

(Geneva, 1980)

When a new system is being studied, early consideration should be given to operational and maintenance requirements in accordance with Recommendation M.15 in Volume IV.

Recommendation A.20

**COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS
OVER DATA TRANSMISSION**

(Geneva, 1964; Mar del Plata, 1968; Geneva, 1972, 1976 and 1980)

The CCITT,

considering

(a) that, according to Article 1 of the agreement between the United Nations and the International Telecommunication Union, the United Nations recognizes the International Telecommunication Union as the specialized agency responsible for taking such action as may be appropriate under its basic instrument for the accomplishment of the purposes set forth therein;

(b) that Article 4 of the *International Telecommunication Convention* (Malaga-Torremolinos, 1973) states that the purposes of the Union are:

- “a) to maintain and extend international cooperation for the improvement and rational use of telecommunications of all kinds;
- b) to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, so far as possible, generally available to the public;
- c) to harmonize the actions of nations in the attainment of those ends”;

(c) that Article 40 of the Convention states that, in furtherance of complete international coordination on matters affecting telecommunication, the Union shall cooperate with international organizations having related interests and activities;

(d) that in the study of data transmission the CCITT has to collaborate with the organizations dealing with data processing and office equipment and particularly the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC);

(e) that this collaboration has to be organized in a manner that will avoid duplication of work and decisions that would be contrary to the principles set out above,

(unanimously) declares the view

that international standards for data transmission should be established with the following considerations in mind:

(1) Clearly it will be the responsibility of the CCITT to lay down standards for *transmission channels*, i.e. aspects of data transmission which require a knowledge of telecommunication networks or affect performance of these networks.

(2) The standardization of signal conversion terminal equipment (modems) is the province of the CCITT; the standardization of the junction (interface) between modem and the data terminal equipment is a matter of agreement between the CCITT and the ISO or the IEC.

(3) Devices designed to detect and (or) correct errors must take account of:

- the error rate tolerable to the user;
- the line transmission conditions;
- the code, which has to meet the exigencies of the data alphabet and the requirements of error-control (this must be such as to give an output satisfactory to the user) together with the requisite signalling (synchronism, repetition signals, etc.).

Standardization here may not come wholly within the CCITT's province, but the CCITT has very considerable interests at stake.

(4) The alphabet (definition 52.02 in the *List of definitions*) is a “table of correspondence between an agreed set of characters and the signals which represent them”.

The CCITT and the ISO reached agreement on an alphabet for general (but not exclusive) use for data and message transmission and have standardized a common alphabet which is known as International Alphabet No. 5 (CCITT Recommendation V.3) (ISO/646-1973: seven-bit coded character sets for information processing interchange).

Complementary study of some control characters of the alphabet should be effected in cooperation with each other.

(5) Coding (definition 52.05 in the *List of definitions*) is “a system of rules and conventions according to which the telegraph signals forming a message or the data signals forming a block should be formed, transmitted, received and processed”. Hence, it consists of a transformation of the format of the signals in the alphabet for taking account of synchronous methods, and introduction of redundancy in accordance with the error-control system. This is not a field in which the CCITT alone may be able to decide; however, no decision should be taken without reference to the Committee, because of the possible restrictions which transmission and switching peculiarities may impose on coding.

When the general switched network is used (telephone or telex) and when the error-control devices are subject to restrictions (switching signals – reserved sequences), it is the CCITT which is in fact responsible for any necessary standardization in conjunction with other bodies.

(6) The limits to be observed for transmission performance on the transmission path (modem included) fall within the competence of the CCITT; the limits for the transmission performance of the sending equipment and the margin of terminal data equipment (depending on the terminal apparatus and the transmission path limits) should be fixed by agreement between the ISO and the CCITT.

(7) In all instances, the CCITT alone can lay down manual and automatic operating procedures for the setting-up, holding and clearing of calls for data communications when the general switched networks are used, including type and form of signals to be interchanged at the interface between data terminal equipment and data circuit-terminating equipment.

(8) When a public data network is involved, the CCITT has the responsibility to provide the Recommendations which apply. Where these Recommendations have an impact on the basic design and features of data processing systems and office equipment (normally DTE), they shall be the subject of consultation between CCITT and ISO and in some cases a mutual agreement may be desirable. Likewise when the ISO is developing or changing standards that may affect compatibility with the public data network there shall be consultation with the CCITT.

Recommendation A.21

COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS ON CCITT-DEFINED TELEMATIC SERVICES¹⁾

(Geneva, 1980)

The CCITT,

considering

(a) that, according to Article 1 of the agreement between the United Nations and the International Telecommunication Union, the United Nations recognizes the International Telecommunication Union as the specialized agency responsible for taking such action as may be appropriate under its basic instrument for the accomplishment of the purposes set forth therein;

(b) that Article 4 of the *International Telecommunication Convention* (Malaga-Torremolinos, 1973) states that the purposes of the Union are:

- “a) to maintain and extend international cooperation for the improvement and rational use of telecommunication of all kinds;
- b) to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them as far as possible, generally available to the public;
- c) to harmonize the actions of nations in the attainment of those ends”;

(c) that Article 40 of the Convention states that “in furtherance of complete international coordination on matters affecting telecommunication, the Union shall cooperate with international organizations having related interests and activities”;

(d) that this cooperation has to recognize the advisory capacity of organizations participating in the work of CCITT;

(e) that, in the study of terminals for new CCITT-defined telematic services (e.g. Teletex, Telefax, Datafax, Bureaufax, Videotex), ISO in particular is invited to give advice to CCITT based on their work on data systems and data communications;

(f) that this cooperation has to be organized in a manner that will avoid duplication of work and of decisions that would be contrary to the principles set out above,

recognizes the following principles

(1) it is the responsibility of the CCITT alone to make the decisions regarding the operational, technical (including factors needed to ensure international interworking) and tariff principles of the CCITT-defined services.

(2) while the CCITT will define many of the relevant factors for the CCITT-defined telematic services, other international organizations will be invited to give specialist advice to CCITT on subjects that are of mutual interest, such as:

- character sets and coding;
- end-to-end control procedures including error protection;
- interfaces between terminals and circuit terminating equipment;
- terminal transmitter distortion and receiver margin;
- paper sizes and text formatting.

(3) standardization, if required, of hardware and software implementation of terminals, such as printing systems, paper feed, character type fonts, paper characteristics etc., are outside the scope of CCITT.

¹⁾ “Telematic services” is used provisionally and include such services as Videotex, Teletex, facsimile, etc.

SERIES B RECOMMENDATIONS

Means of expression

<i>Recommendation No.</i>	<i>Short title</i>
B.1	Letter symbols for telecommunications
B.3	Use of the international system of units (SI)
B.4	Transmission units
B.10	Graphical symbols and rules for the preparation of diagrams in telecommunications
B.11	Legal time; use of the term UTC
B.12	Logarithmic quantities and units

Recommendation B.1¹⁾

LETTER SYMBOLS FOR TELECOMMUNICATIONS

(Geneva, 1964; Mar del Plata, 1968; Geneva, 1980)

The CCITT,

considering

(a) that in order to simplify the reading of documents dealing with telecommunication technique, it is essential to use simple notations in a homogeneous system and having well-defined meaning; that, moreover, it is an advantage, wherever possible, to have notations that have been universally adopted;

(b) that CMV is collaborating with Technical Committee No. 25 of the IEC,

recommends

that in their mutual relations the ITU and its permanent organs and Administrations and recognized private operating agencies use in all languages, wherever possible, the letter symbols and the notations recommended by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) to represent the physical quantities and the mathematical operations.

Recommendation B.3²⁾

USE OF THE INTERNATIONAL SYSTEM OF UNITS (SI)

(New Delhi, 1960; Geneva, 1964; Geneva, 1980)

The CCITT,

recommends

that the various ITU organs, as well as Administrations and recognized private operating agencies should use in their mutual relations:

- the units of the international system of units (SI) adopted by the General Conference of Weights and Measures (CGPM) and supported by the International Organization for Standardization (ISO); this system is based on the rationalized form of electromagnetic and electrotechnical relations;
- the letter symbols adopted in the SI system;
- rules similar to those of the SI system when it is necessary to form names of other units and their symbols in the field of telecommunications.

¹⁾ A similar text will be submitted to the CCIR as a new Recommendation.

²⁾ A similar text will be submitted to CCIR as a revision of Recommendation 430-1.

Recommendation B.4

TRANSMISSION UNITS

(Mar del Plata, 1968)

The CCITT,

considering

(a) that for the purposes of transmission measurements and the expression of the results of such measurements, two transmission units, namely, the neper and the bel, together with their submultiples were provisionally recommended on an equal footing by the 1926 Plenary Assembly of the Comité consultatif international des communications téléphoniques à grande distance, and that until now, the CCITT has continued to use these two units on an equal footing;

(b) that now, as then, it would be convenient for international specifications limits and for the exchange of information at international level concerning the results of transmission measurements to use only one transmission unit;

(c) that although national Administrations still differ in the transmission unit that they use within their own country, both the neper and the decibel are in common use, and sometimes both within one country;

(d) that for radiocommunications, the decibel is the only unit used for expressing measurement results in transmission units,

unanimously recommends

(1) that countries can continue to use either the neper or the decibel for measurement purposes within their own territory;

(2) that for the international exchange of information concerning line transmission measurement and related values and for the international specification of limits for such values the only transmission unit to be used should be the decibel;

(3) that to avoid conversion of values, countries which prefer to do so can continue to use the neper between themselves by bilateral agreement;

(4) that for theoretical, scientific calculations, where ratios are expressed in terms of logarithms to the base "e", the neper will always be used, implicitly or explicitly.

Recommendation B.10¹⁾

**GRAPHICAL SYMBOLS AND RULES FOR THE PREPARATION OF DIAGRAMS
IN TELECOMMUNICATIONS**

(Mar del Plata, 1968; Geneva, 1972; Geneva, 1980)

The CCITT,

which cooperates in the work of the CCI/IEC Joint Working Group set up for the purpose of establishing internationally agreed graphical symbols and rules for the preparation of diagrams, charts and tables and for item designations (see CCITT Recommendation A.13 or CCIR Resolution 23-1 [MOD I]),

recommends

that, on diagrams for international use concerning telecommunications, the Administrations and private operating agencies of the CCI Secretariats should use the graphical symbols for diagrams given in IEC Series 117²⁾ publications and should observe the rules for the preparation of diagrams, charts and tables and for item designation laid down in IEC Series 113 publications.

Administrations wishing to use symbols on equipment are recommended to refer to IEC Publication 417.

¹⁾ A similar text will be submitted to CCIR as a revision of Recommendation 461-2.

²⁾ IEC Publication 117 is under revision and will eventually be replaced by a new Series numbered 617.



Recommendation B.11**LEGAL TIME; USE OF THE TERM UTC***(Geneva, 1980)*

The CCITT,

considering

(a) that according to CCIR Recommendation 460-2 all standard-frequency and time-signal emissions should conform to Coordinated Universal Time (UTC);

(b) that since 1972 UTC has been available as a worldwide time reference;

(c) that in 1975 the General Conference of Weights and Measures (CGPM) recommended the use of UTC as the basis of civil time;

(d) that other scientific organizations, particularly the International Astronomical Union (IAU) and the International Union of Radio Science (URSI) have recommended the general use of UTC;

(e) that UTC enables the time of events to be determined with an uncertainty of 1 μ s;

(f) that according to CCIR Recommendation 536 and in accordance with the recommendation of the General Conference of Weights and Measures the designation UTC is to be used in all languages;

(g) that the World Administrative Radio Conference (Geneva, 1979) has decided that UTC shall be used in international radiocommunication activities;

(h) that in accordance with Appendix 2 to the Telegraph and Telephone Regulations, Geneva, 1973 (relating to reciprocal exchange of information through the medium of the General Secretariat) Resolution No. 1 of these Regulations recommends Administrations inter alia to inform the Secretary-General of the legal time they apply,

unanimously recommends

that UTC should be used to designate the time in all other international telecommunication activities (including operational information) and in all service documents of the International Telecommunication Union.

Recommendation B.12¹⁾**LOGARITHMIC QUANTITIES AND UNITS²⁾***(Geneva, 1980)*

The CCITT,

considering

(a) the frequent use by the CCIR and CCITT of logarithmic units for expressing quantities;

(b) the IEC Publication 27-3 (1974) on logarithmic quantities and units;

(c) the collaboration of CMV with Technical Committee No. 25 of the IEC which permits coordination with a view to establishing further Recommendations;

(d) the need, within the ITU, to publish a guide on this subject without delay,

unanimously recommends

that symbols for logarithmic units used for such quantities that directly or indirectly refer to power should be chosen with the guidance of Annex A.

Note – The sections of Annex A mentioned below are of more particular concern to the CCIR:

A.1.2 Antenna gain

A.1.4 Protection ratio

A.2.2 Power spectral density

A.2.3 Power flux-density

A.2.4 Power density with respect to temperature

A.2.5 Spectral power-flux density

A.2.6 Absolute level of an electromagnetic field

A.2.8 Carrier-to-spectral noise density ratio

A.2.9 Figure of merit

Appendix I, §I.2.1

¹⁾ A similar text will be submitted to CCIR as a revision of Recommendation 574.

²⁾ In Annex A the notation \lg has been used throughout. The notation \lg is also recommended for use by the ISO, and is used by the IEC.

ANNEX A

(to Recommendation B.12)

Use of the “decibel”

A.1 The “decibel” is used to express a power ratio, and also the ratios of currents and voltages or analogous quantities in other branches (such as electric fields or acoustic pressures) when the conditions are such that scalar ratios of these quantities are the square roots of the corresponding power ratios.

This implies that the symbol dB without additional indication should be used to indicate a difference in levels, or the logarithm of a ratio of two powers, power densities, or two other quantities clearly connected with power; and that the symbol dB followed by additional information within parentheses can be used to express an absolute level of power, of power density or another quantity clearly connected with power, in relation to a reference value within the parentheses.

Furthermore, because of usage and for practical reasons some special notations with dB (some examples of which are shown under § A.2.10) may be used.

It should be observed that, as a result of some calculations on complex quantities, a real part in nepers and an imaginary part in radians are obtained. The expressions in nepers and in radians can be converted into decibels and degrees by using conversion factors (see Appendix III).

It should further be observed that the value of some logarithmic quantities may be impedance-dependent and that therefore, the value of such quantities without adequate information about impedance can be meaningless or misleading.

In the case of loss or gain, the exact designation must be given (e.g. image attenuation coefficient, insertion loss, antenna gain) which in fact refers to the precise definitions of the ratio in question (terminal impedances, reference conditions, etc.).

A.1.1 *Transmission loss* (Ref. Recommendation 341, Volume I)

This is the ratio, expressed in decibels, of the transmitted power (P_t) to the received power (P_r):

$$L = 10 \log (P_t/P_r) \quad \text{dB}$$

A.1.2 *Antenna gain* (Ref. Radio Regulations, Article 1, No. 99)

This is “the ratio of the power required at the input of a reference antenna (P_0) to the power supplied to the input of the given antenna (P_a) to produce, in a given direction, the same field strength at the same distance”. It is generally expressed in decibels:

$$G = 10 \log (P_0/P_a) \quad \text{dB}$$

A.1.3 *Signal-to-noise ratio*

This is either the ratio of the signal power (P_s) to the noise power (P_n), or the ratio of the signal voltage (U_s) to the noise voltage (U_n) measured at a given point with specified conditions. It is, expressed in decibels:

$$R = 10 \log (P_s/P_n) \quad \text{dB} \quad \text{or} \quad R = 20 \log (U_s/U_n) \quad \text{dB}$$

The ratio of the wanted signal to the unwanted signal is expressed in the same way:

A.1.4 *Protection ratio*

This is either the ratio of the wanted signal power (P_u) to the maximum permissible interfering signal power (P_i), or the ratio of the wanted signal field-strength (E_u) to the maximum permissible interfering signal field-strength (E_i). It is expressed in decibels:

$$A = 10 \log (P_u/P_i) \quad \text{dB} \quad \text{or} \quad A = 20 \log (E_u/E_i) \quad \text{dB}$$

A.2 In many cases, the comparison of a quantity, here called x , with a specified reference quantity of the same kind (and dimension), x_{ref} is expressed by the logarithm of the ratio x/x_{ref} . This logarithmic quantity is often called “the level of x (with respect to x_{ref})” or “the x -level (with respect to x_{ref})”. With the general letter symbol for level L , the level of the quantity x may be indicated L_x .

Other names and other symbols exist and can be used, x may in itself be a single quantity, e.g. power P , or a ratio, e.g. P/A , where A is area, x_{ref} is here supposed to have a fixed value, e.g. 1 mW, 1 W, 1 μ W/m², 20 μ Pa, 1 μ V/m.

The level representing the quantity x with reference quantity x_{ref} may be indicated by the quantity symbol: L_x (with respect to x_{ref}), and may be expressed in decibels, when the reference quantity is a power, or a quantity linked to power, in a well defined way.

Example:

The statement that the level of a certain power, P , is 15 dB above the level corresponding to 1 W can be written:

$$L_p \text{ (with respect to 1 W)} = 15 \text{ dB, which means } 10 \log \left(\frac{P}{1 \text{ W}} \right) = 15^3)$$

$$\text{or } 10 \log P \text{ (in watts)} = 15$$

In many cases it is found practical to use a condensed notation based only on the unit, which in this case would be:

$$L_p = 15 \text{ dB (1 W)}$$

The number "1" in the expression of the reference quantity can be omitted, but this is not recommended in cases where confusion may occur. (Such omission has been made in some of the examples below.) In other words, where no number is shown, the number 1 is to be understood.

There exist condensed notations, for special cases, such as dBW, dBm, dBm0. See further § A.2.10.

Below are given some examples in which the reference level is expressed after the unit in a condensed form. It must be observed that the condensed notation is often insufficient for characterizing a quantity, and that then a clear definition or another appropriate description of the quantity must be given.

A.2.1 Power

The logarithmic quantity "absolute power level" corresponds to the ratio of P and a reference power, e.g. 1 W.

If $P = 100 \text{ W}$ and the reference power 1 W, we obtain:

$$\begin{aligned} L_p &= 10 \log (P/1 \text{ W}) && \text{dB} \\ &= 10 \log (100 \text{ W}/1 \text{ W}) && \text{dB} \\ &= 20 \text{ dB} \end{aligned}$$

with the condensed notation 20 dB (1 W) or 20 dBW, dBW being the abbreviation for: dB (1 W). With the reference power 1 mW and $P = 100 \text{ W}$ we obtain 50 dB (1 mW), or with the special notation mentioned earlier, 50 dBm, being the abbreviation for: dB (1 mW). The notations dBW and dBm are currently used in the CCIR and the CCITT. See further § A.2.10.

A.2.2 Power spectral density (with respect to bandwidth)

The logarithmic quantity corresponds to the ratio of $P/\Delta f$ (where Δf denotes a frequency band) and a reference quantity, e.g. 1 mW/kHz. P may be a noise power. The logarithm will in this case, as in all other cases, be taken of a pure number.

An example with a condensed notation is 7 dB (1 mW/kHz) or that which is the same thing: 7 dB (W/MHz) or 7 dB ($\mu\text{W}/\text{Hz}$).

A.2.3 Power flux-density (with respect to area)

The logarithmic quantity corresponds to the ratio of P/A , where A is area, and a reference power density, e.g. 1 W/m². A notation in a certain case can be:

$$\begin{aligned} &- 40 \text{ dB (W/m}^2\text{)} \\ \text{or } &- 10 \text{ dB (mW/m}^2\text{)}. \end{aligned}$$

A.2.4 Power density with respect to temperature

The logarithmic quantity corresponds to the ratio of P/T , where T is temperature, and a reference power density, e.g. 1 mW/K, where K is kelvin.

$$\begin{aligned} \text{An example is } &45 \text{ dB (mW/K)} \\ \text{or } &15 \text{ dB (W/K)}. \end{aligned}$$

A.2.5 Spectral power-flux density (power density with respect to area and frequency band)

The logarithmic quantity corresponds to the ratio of $P/(A \cdot \Delta f)$ and a reference density e.g. 1 W/(m² · Hz).

$$\begin{aligned} \text{An example is } &- 18 \text{ dB (W/[m}^2 \cdot \text{Hz])} \\ \text{or } &- 18 \text{ dB (W} \cdot \text{m}^{-2} \cdot \text{Hz}^{-1}\text{)}. \end{aligned}$$

A variant sometimes used is, dB (W/[m² · 4 kHz]).

³⁾ In the ratio $(P/1 \text{ W})$, it is evident that both powers must be expressed in the same units.

A.2.6 Absolute level of an electromagnetic field

The strength of an electromagnetic field can be expressed by a power density (P/A), by an electric field-strength E or by a magnetic field-strength H . The field-strength level L_E is the logarithm of the ratio of E and a reference field-strength, usually $1 \mu\text{V/m}$.

An example with a condensed notation is:

$$L_E = 5 \text{ dB } (\mu\text{V/m}).$$

As the power carried by an electromagnetic field is linked to the square of the field strength, this notation means:

$$20 \log E (\mu\text{V/m}) = 5.$$

A.2.7 Sound pressure level

The level corresponds to the ratio of sound pressure and a reference pressure, often $20 \mu\text{Pa}$.

Example: 15 dB ($20 \mu\text{Pa}$).

As acoustic power is linked to the square of sound pressure, this means:

$$20 \log (p/20 \mu\text{Pa}) = 15.^4)$$

A.2.8 Carrier to spectral noise density ratio (C/N_0)

This is the ratio $P_c/(P_n/\Delta f)$ – where P_c is the carrier power, P_n the noise power, Δf the corresponding frequency bandwidth. This ratio is homogeneous with a frequency, it cannot be expressed without caution in terms of decibels, for power is not linked with frequency on a well-defined basis.

This ratio could be expressed in relation with a reference quantity such as $1 \text{ W}/(\text{W}/\text{Hz})$ which clearly indicates the origin of the result.

For example, with $P_c = 2 \text{ W}$, $P_n = 20 \text{ mW}$, and $\Delta f = 1 \text{ MHz}$, for the logarithmic quantity corresponding to C/N_0 we have:

$$10 \log \left(\frac{P_c}{P_n/\Delta f} \right) = 50 \text{ dB } (\text{W}/(\text{W}/\text{kHz}))$$

This expression is abbreviated to read 50 dB(kHz) which should however be avoided if it is liable to give rise to any misunderstanding.

A.2.9 Figure of merit (M)

The figure of merit (M) characterizing a receiving radio station is a logarithmic quantity which is related to the antenna power gain G (in decibels) and the absolute temperature T (in kelvins) in the following way:

$$M = \left[G - 10 \log \left(\frac{T}{1\text{K}} \right) \right] \text{ dB } (\text{W}/(\text{W.K}))$$

The decibel notation may be abbreviated to read dB (K^{-1}) which should however be avoided if it is liable to give rise to misunderstanding.

A.2.10 Examples of special notations, the use of which may be continued. These notations are often made in addition to other notations.

For absolute power level (See Appendix I)

- dBW: absolute power level with respect to 1 watt, expressed in decibels
- dBm: absolute power level with respect to 1 milliwatt, expressed in decibels
- dBm0: absolute power level with respect to 1 milliwatt, expressed in decibels, referred to a point of zero relative level
- dBm0p: absolute psophometric power level (weighted for telephony) with respect to 1 milliwatt, expressed in decibels, referred to a point of zero relative level
- dBm0s: absolute power level with respect to 1 milliwatt, expressed in decibels, referred to a point of zero relative level in sound programme transmission
- dBm0ps: absolute psophometric power level (weighted for sound programme transmission) with respect to 1 milliwatt, expressed in decibels, referred to a point of zero relative level in sound programme transmission.

For absolute audio-frequency noise level (see Appendix I, § I.2.4):

- dBq: absolute voltage level with respect to a reference voltage described in § 2.6 of Recommendation 468-2 measured with a quasi-peak noise meter without a weighting network and expressed in decibels

⁴⁾ In the ratio $(p/20 \mu\text{Pa})$, it is evident that both sound pressures must be expressed in the same units.

- dBq0s: absolute voltage level with respect to a reference voltage described in § 2.6 of Recommendation 468-2 measured with a quasi-peak noise meter without a weighting network and expressed in decibels referred to a point of zero relative level in sound programme transmission
- dBqp: absolute voltage level with respect to a reference voltage described in § 2.6 of Recommendation 468-2 measured with a quasi-peak noise meter (weighted for sound programme transmission) and expressed in decibels
- dBq0ps: absolute psophometric voltage level with respect to a reference voltage described in § 2.6 of Recommendation 468-2 measured with a quasi-peak noise meter (weighted for sound programme transmission) and expressed in decibels, referred to a point of zero relative level in sound programme transmission.

For relative power level (see Appendix I)

dBr: decibels (relative)

dBrS: relative power level expressed in decibels, referred to another point in sound programme transmission.

For absolute acoustic pressure level

dBA (or dBB, dBC): weighted acoustic pressure level with respect to 20 µPa, mentioning the weighting curve used (curves A, B or C, see IEC Publication 123).

For antenna gain in relation to an isotropic antenna

dB_i.

Note 1 – In the case of the ratio “energy per bit to spectral noise density”, E/N_0 , which is used in digital transmission, the ratio is made between two quantities homogeneous with spectral power density, and this ratio may normally be expressed in decibels, like power ratios (see § A.1 above). However, it is necessary to ensure that the units used for the expression of both terms in the ratio are equivalent; for example, joule (J) for energy and watts per hertz (W/Hz) for spectral noise density.

Note 2 – In Appendix I are given the principles of “use of the term decibels in telecommunications” taken from the “Conclusions of the Interim Meeting of the Interim Study Group on Vocabulary (CIV)” (Geneva, 1972).

The examples given in the present Recommendation are illustrations of these principles.

Note 3 – In Appendix II is given the principle of the notation recommended by the IEC for expressing the level of a quantity with respect to a specified reference. The notations used in the present Recommendation are applications of this principle.

APPENDIX I

(to Recommendation B.12)

Use of the term decibel in telecommunication

I.1 *Use of the decibel for ratios of quantities directly connected with the concept of power*

I.1.1 *Ratio of two powers*

The ratio of two powers is generally expressed as a logarithmic difference, usually in decibels, for which the symbol is dB. By definition, if P_1 and P_2 are two power values, their logarithmic difference is given in decibels by:

$$N = 10 \log \left(\frac{P_1}{P_2} \right)$$

Note – Originally a decibel was simply one-tenth of the real unit, the bel (B), the number n of bels being itself defined by:

$$n = \log \left(\frac{P_1}{P_2} \right)$$

However, it is the practice nowadays to use only the decibel (dB).

I.1.2 Absolute power level

Definition: Expression as a logarithmic difference, generally in decibels, of the ratio between the power of a signal at a point in a transmission channel and the reference power, e.g. one watt or milliwatt.

Note – It is necessary for the reference power to be indicated by a symbol:

I.1.2.1 When the reference power is one watt, the absolute power level is expressed in “decibels relative to one watt” and the symbol “dBW” is used.

I.1.2.2 When the reference power is one milliwatt, the absolute power level is expressed in “decibels relative to one milliwatt” and the symbol “dBm” is used.

I.1.3 Relative power level and related concepts

I.1.3.1 Definition of relative power level

It is defined by the expression $10 \log (P/P_0)$, where P represents the power of a sinusoidal test signal (at 800 or 1000 Hz) at the point concerned and P_0 the power of that signal at the transmission reference point.

I.1.3.2 Transmission reference point

In the old transmission plan, the CCITT had defined “the zero relative level point” as being the two-wire origin of a long distance circuit (point 0 of Fig. I-1/B.12).

In the presently recommended transmission plan the relative level should be -3.5 dBr at the virtual switching point on the sending side of a four-wire international circuit (point V of Fig. I-2/B.12). The “transmission reference point” or “zero relative level point” (point T of Fig. I-2/B.12) is a virtual two-wire point which would be connected to V through a hybrid transformer having a loss of 3.5 dB. The conventional load used for the computation of noise on multi-channel carrier systems corresponds to an absolute mean power level of -15 dBm at point T.

I.1.3.3 Meaning of “dBm0”

If a measuring signal with an absolute power level L_M (in dBm) is applied at point T, the absolute power level of the signal appearing at a point X, where the relative level is L_{XR} (in dBr), will be $L_M + L_{XR}$ (in dBm).

Conversely, if a signal at X has an absolute power level L_{XA} (in dBm), it is often convenient to “refer it to a zero relative level point” by computing L_0 (in dBm0) by the formula:

$$L_0 = L_{XA} - L_{XR}$$

This formula may be used, not only for signals, but also for noise (weighted or unweighted), which helps in the computation of a signal-to-noise ratio.

I.1.3.4 Case of sound programme transmission

The zero relative level point (point A of Fig. I-3/B.12) is the origin of the international sound-programme connection, chosen somewhere in the originating studio. When the relative level at the output of an amplifier (point C of Fig. I-3/B.12) is fixed for example at 6 dBr, this means that if a 800 Hz sine wave signal with an rms voltage of 0.775 V, which represent the absolute zero voltage level, is applied at point A, this will result at point C in an absolute voltage level of $+6$ dB (0.775 V), i.e. an rms voltage of 1.55 V.

During the transmission, it should be checked that the peaks at point A very rarely exceed 3.1 V, which corresponds to an rms voltage of 2.2 V for a sine-wave i.e. 9 dB above the reference voltage (0.775 V) at point A or $+9$ dBm0s.

Noise is measured, according to CCIR Recommendation 468-2, with a quasi-peak instrument (then in dBq), with or without a weighting network, and can be referred to point A.

Note on § I.1.3

More detailed explanations are given in the following Recommendations, to be published in Volume III of the CCITT books (Geneva, 1980):

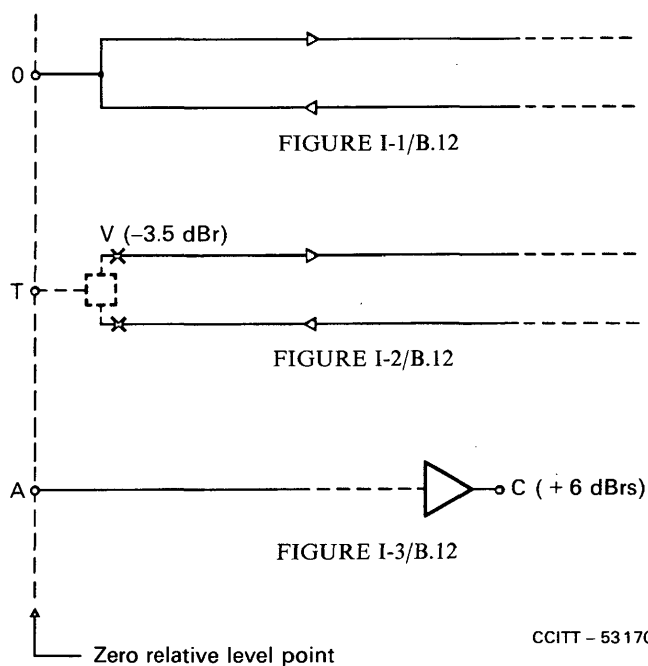
- G.101 (§ 5) and G.223 for §§ I.1.3.1 and I.1.3.2 above,
- J.13 (Fig. 3) and J.14 for I.1.3.4.

I.1.4 Power density

Definition: Quotient of a power by another quantity, for example, an area, a frequency band, a temperature.

Note 1 – The quotient of a power by an area is called “power flux-density” (“puissance surfacique”) and is commonly expressed in “watts per square metre” (symbol: $W \cdot m^{-2}$ or W/m^2).

The quotient of a power by a frequency bandwidth is called “power spectral density” and can be expressed in “watts per hertz” (symbol: $W \cdot Hz^{-1}$ or W/Hz). It can also be expressed with a unit involving a bandwidth characteristic of the technique concerned, for example, 1 kHz or 4 kHz in analogue telephony, 1 MHz in digital transmission or in television; the power spectral density is then expressed in “watts per kilohertz” (W/kHz) or in “watts per 4 kHz” ($W/4$ kHz) or even in “watts per megahertz” (W/MHz).



The quotient of a power by a temperature, used particularly in the case of noise powers, has no specific name. It is usually expressed as “watts per kelvin” (symbol: $W \cdot K^{-1}$ or W/K).

Note 2 – In some cases a combination of several types of power densities can be used, for example a “spectral power flux-density” which is expressed as “watts per square metre and per hertz” (symbol: $W \cdot m^{-2} \cdot Hz^{-1}$ or $W/(m^2 \cdot Hz)$).

I.1.5 Absolute power density level

Definition: Expression as a logarithmic difference, usually in decibels, of the ratio between the power density at a given point and a reference power density.

Note – For example, if one watt per square metre is chosen as the reference power flux-density, the absolute power flux-density levels are expressed as “decibels with respect to one watt per square metre” (symbol: $dB(W/m^2)$).

Similarly, if one watt per hertz is chosen as the spectral reference power density, the absolute spectral power density levels are expressed as “decibels with respect to one watt per hertz” (symbol: $dB(W/Hz)$).

If one watt per kelvin is chosen as the reference for power density per unit temperature, the absolute power density levels per temperature unit are expressed as “decibels with respect to one watt per kelvin” (symbol: $dB(W/K)$).

This notation can easily be extended to combined densities. For example, the absolute spectral density levels of the flux-density are expressed as “decibels with respect to one watt per square metre and per hertz” for which the symbol is: $dB(W/(m^2 \cdot Hz))$.

I.2 Use of the decibel for ratios of quantities indirectly connected with the concept of power

Current practice has led to an extension of the use of the term decibel to ratios of quantities which are only indirectly connected with the concept of power or which are linked to it through the medium of a third quantity. In these various cases, the decibel should be used with the utmost precaution and should always be accompanied by a note indicating the conventions adopted and the sphere of validity of this usage.

A case extremely common in practice, is where the ratio of two powers P_1 and P_2 depends solely on the ratio of the values X_1 and X_2 of another quantity X by an equation in the form:

$$P_1/P_2 = (X_1/X_2)^\alpha$$

α being any real number. The corresponding number of decibels can then be *calculated* from the ratio:

$$\frac{X_1}{X_2} \text{ from the equation:}$$

$$N = 10 \log (P_1/P_2) = 10 \alpha \log (X_1/X_2) \quad \text{dB}$$

It should be noted that a quantity X is not always associated with the same value of the number α , and therefore it is not possible, without some other indication, to express in decibels the ratio of two values of the quantity X .

Most often α is equal to 2, and then the expression in decibels of ratios of currents or voltages or other analogous quantities in other fields, is:

$$N = 20 \log (X_1/X_2) \quad \text{dB}$$

I.2.1 Absolute level of the electromagnetic field

The electromagnetic field set up by a transmitter is of concern to some services. At considerable distances from the antenna this field is generally defined by its electric component E , for which it is often convenient to use a logarithmic scale.

For a non-guided wave propagated in a vacuum, or in practice in the atmosphere, there is a clearly defined relationship between the electric field E and the power flux-density p :

$$E^2 = Z_0 p$$

Z_0 , which is the intrinsic impedance of the vacuum, having a fixed numerical value of 120π ohms. In particular, a field of 1 microvolt per metre corresponds to a power flux-density of $-145.8 \text{ dB(W/m}^2\text{)}$.

The absolute level of the electric field can then be defined by the equation:

$$N = 20 \log \left(\frac{E}{E_0} \right)$$

E_0 being a reference field, generally 1 microvolt per metre. In this case, N represents the absolute field level in "decibels with respect to 1 microvolt per metre", the symbol for which is "dB($\mu\text{V/m}$)".

I.2.2 Voltage ratios

In certain sphere such as audio frequencies, the concept of voltage is sometimes more important than that of power. This is the case, for example, when low output- and high input-impedance quadripoles are associated in tandem. In this way a deliberate departure is made from the impedance matching conditions in order to simplify the formation of these quadripoles. When this is done, only the voltage ratios at different points in the link need to be taken into consideration.

It is then convenient to express these voltage ratios in a logarithmic scale, e.g. to the base 10, by defining the number N of corresponding units by means of the equation:

$$N = K \log \left(\frac{U_1}{U_2} \right)$$

In this equation the coefficient K is *a priori* arbitrary. However, by analogy with the operation:

$$N = 20 \log \left(\frac{U_1}{U_2} \right)$$

which expresses in decibels the ratio of the $I^2 R$ loss as in two equal resistances at the terminals of which the voltages U_1 and U_2 respectively, are applied, one is led to adopt the value 20 for the coefficient K . The number N then expresses in decibels the power ratios which would correspond to the voltage ratios, if the latter were applied to equal resistances, although in practice this is not generally the case.

I.2.3 Absolute voltage level

If U_2 is a reference voltage, the number N defined above becomes the measurement of an "absolute voltage level". A reference voltage with an rms of 0.775 volts is generally adopted which corresponds to a 1 milliwatt $I^2 R$ loss in a resistance of 600 ohms, since 600 ohms represents a rough approximation to the characteristic impedance of certain balanced telephone lines.

I.2.3.1 If the impedance at the terminals of which the voltage U_1 is measured, is in fact 600 ohms, the absolute voltage level thus defined, corresponds to the absolute power level with respect to 1 milliwatt, and so the number N exactly represents the level in decibels with respect to 1 milliwatt (dBm).

I.2.3.2 If the impedance at the terminals of which the voltage U_1 is measured, is R ohms, N equals the number of dBm increased by the quantity $10 \log \left(\frac{R}{600} \right)$.

I.2.3.3 If the impedance at the terminals of which the voltage U_1 is measured is not specified, the corresponding power level cannot be calculated. In this case, if the term decibel⁵⁾ is used it is imperative to make it clear that it refers to an *absolute voltage level* (and not power level) to avoid confusion.

I.2.4 *Absolute audio-frequency noise level in broadcasting, sound recording or sound-programme transmission*

Measurement of audio-frequency noise in broadcasting, sound recording or sound-programme transmission is made, normally through a weighting network and by following the quasi-peak value method of Recommendation 468-2 using a reference voltage of 0.775 volt at 1 kHz and a nominal impedance of 600 ohms and expressing the results normally in dBqp.

Note – The two notations “dBq” and “dBm” should not be used interchangeably. In sound-programme transmission the notation “dBq” is restricted to level measurements of noise with single or multiple tone bursts whereas the notation “dBm” only applies to sinusoidal signals used for lining up the circuit.

APPENDIX II

(to Recommendation B.12)

Notation for expressing the reference of a level

(Part 5 of IEC Publication 27-3)

A level representing the quantity x with the reference quantity x_{ref} may be indicated by:

L_x (with respect to x_{ref}) or by L_x/x_{ref} .

Examples

The statement that a certain sound pressure level is 15 dB above the level corresponding to a reference pressure of 20 μ Pa can be written as:

$$L_p \text{ (re 20 } \mu\text{Pa)} = 15 \text{ dB or as } L_{p/20 \mu\text{Pa}} = 15 \text{ dB.}$$

The statement that the level of a current is 10 Np below 1 ampere can be written as:

$$L_I \text{ (with respect to 1 A)} = -10 \text{ Np.}$$

The statement that a certain power level is 7 dB above 1 milliwatt can be written as:

$$L_p \text{ (with respect to 1 mW)} = 7 \text{ dB.}$$

The statement that a certain electric field-strength is 50 dB above 1 microvolt per metre can be written as:

$$L_E \text{ (with respect to 1 } \mu\text{V/m)} = 50 \text{ dB.}$$

In presenting data, particularly in tabular form or in graphical symbols, a condensed notation is often needed for identifying the reference value. Then, the following condensed form, illustrated by application to the above examples, may be used:

15 dB(20 μ Pa)
 –10 Np(1 A)
 7 dB(1 mW)
 50 dB(1 μ V/m).

The number “1” in the expression of a reference quantity is sometimes omitted. This is not recommended in cases when confusion may occur.

When a constant level reference is used repeatedly in a given context and explained in the context, it may be omitted.⁶⁾

APPENDIX III

(to Recommendation B.12)

Use of the term neper

(see Recommendation B.4)

⁵⁾ It would obviously be preferable to use another term but so far no proposal to that effect has been adopted.

⁶⁾ The omission of the reference level, allowed by the IEC, is not allowed in CCIR and CCITT texts.

SERIES C RECOMMENDATIONS

General telecommunications statistics

Recommendation C.1

YEARBOOK OF COMMON CARRIER TELECOMMUNICATION STATISTICS

(Geneva, 1972; Geneva, 1976; Geneva, 1980)

(1) The CCITT recommends that a Yearbook of Common Carrier Telecommunication Statistics be published annually by the General Secretariat of the ITU.

(2) This statistical Yearbook is to be a collection of data on the various branches of common carrier telecommunications (see also Recommendation F.91), namely:

- telephone service,
- telegram service,
- telex service,
- data transmission service.

(Radio services *other than broadcasting* [sound or television] are regarded as common carriers to the extent to which they are used for the transmission of paid messages between subscribers of the telecommunications undertaking.)

(3) The statistical data to be published are those covered by the items listed in Annex A to this Recommendation. Any explanations required for uniform and unambiguous interpretation of the items are given in Annex B.

(4) These statistical data should be provided each year by Administrations before 1 September of the year following the one to which they refer.

(5) The data assembled will be published in chronological series relating to the past ten years.

Important note – Those countries not in a position to communicate all the data listed in the Recommendation should provide the data they do have and mark with a dash (“–”) those items not evaluated.

ANNEX A

(to Recommendation C.1)

List of items appearing in the Yearbook of common carrier telecommunication statistics

A. SIZE OF TELECOMMUNICATION SYSTEMS, TRAFFIC AND STAFF

1 Telephone service

1.1 Size of telephone system

1.1.1	Number of telephone stations (sets) of all kinds connected to the public network.....	10 ³
1.1.2	Number of main lines	10 ³
1.1.3	Number of main lines connected to private branch exchanges (PBX, etc.)	10 ³
1.1.4	Percentage of main lines connected to automatic exchanges	%
1.1.5	Percentage of main lines equipped for direct customer dialling to international destinations.	%
1.1.6	Percentage of main lines which are residential	%

1.1.7	Connection capacity of local public switching exchanges (number of subscriber terminal equipments)	10 ³
1.1.8	Number of trunk and international circuit ends connected to manual switching exchanges ..	10 ³
1.1.9	Number of trunk and international circuit ends connected to automatic switching exchanges	10 ³
1.2	<i>Volume of the demand for connection and size of the waiting list</i>	
1.2.1	New applications for main lines	10 ³
1.2.2	Total demand for main lines (including transfers)	10 ³
1.2.3	Waiting list for main lines	10 ³
1.3	<i>Volume of telephone traffic</i>	
1.3.1	Volume of total national traffic	10 ⁶
1.3.1.1	Volume of local traffic	10 ⁶
1.3.1.2	Volume of national trunk (toll) traffic	10 ⁶
1.3.2	Volume of total outgoing international traffic	10 ⁶
1.3.3	Volume of total traffic	10 ⁶
1.3.4	Outgoing international subscriber dialled telephone traffic as a percentage of total outgoing international telephone traffic	%
2	Public telegram service	
2.1	Number of national paid telegrams	10 ³
2.2	Number of international outgoing full rate telegrams	10 ³
2.3	Number of international outgoing reduced rate (LT) telegrams	10 ³
2.4	Number of outgoing international phototelegrams	10 ³
3	Telex service	
3.1	<i>Size of telex system</i>	
3.1.1	Number of subscriber lines	10 ³
3.2	<i>Volume of telex traffic</i>	
3.2.1	Volume of national traffic	10 ³
3.2.2	Volume of outgoing international traffic	10 ³
3.2.3	Volume of total traffic	10 ³
4	Data transmission	
4.1	<i>Size of data system</i>	
4.1.1	Number of data terminal equipments on the public telephone and telex networks	10 ³
4.1.2	Number of private leased circuits	10 ³
4.1.3	Number of data terminal equipments connected to dedicated public data networks	10 ³
5	Equivalent full-time telecommunications staff	
5.1	Total staff in telecommunication services	10 ³
5.2	Operating staff	10 ³
5.3	Technical staff	10 ³
5.4	Other staff	10 ³

B. DEMOGRAPHIC, ECONOMIC, AND FINANCIAL INFORMATION

Area of country in square kilometres:

km²

Denomination of the national monetary unit:

6 Demographic and macro-economic data

6.1	Number of inhabitants	10 ³
6.2	Number of households	10 ³
6.3	Gross domestic product at factor costs in national currency	10 ⁶
6.4	Gross fixed capital formation in national currency	10 ⁶
6.5	Exchange rate (national currency equivalent to one US\$ at the end of the year)	
6.6	Consumer price index (1970 = 100)	

7 Income, expenditure, and financial results of telecommunication services
(in the national currency, current prices)

7.1	Total income from the telephone service	10 ⁶
7.1.1	Income from connection charges	10 ⁶
7.1.2	Income from annual rentals	10 ⁶
7.1.3	Income from calls	10 ⁶
7.2	Total income from the public telegram service	10 ⁶
7.3	Total income from the telex service	10 ⁶
7.4	Other income (data, facsimile transmission services)	10 ⁶
7.5	Total income from all telecommunication services	10 ⁶
7.6	Total expenditure for all telecommunication services	10 ⁶
7.6.1	Operational expenditure	10 ⁶
7.6.2	Depreciation	10 ⁶
7.6.3	Interest paid	10 ⁶
7.6.4	Taxes	10 ⁶
7.6.5	Other expenditure	10 ⁶
7.7	Income minus expenditure for the telecommunication services	10 ⁶

8 Investments (annual gross construction expenditure) on telecommunication services

8.1	Total annual gross investments in telecommunications (including land and buildings)	10 ⁶
8.2	Total annual gross investments in telecommunications (excluding land and buildings)	10 ⁶
8.3	Annual gross investments for telephone services	10 ⁶
8.4	Annual gross investments in telephone switching equipment	10 ⁶

9 Comparative ratios

9.1	Telephone main lines per inhabitant	%
9.2	Telephone stations (sets) of all kinds, per inhabitant	%
9.3	Telecommunications investments as a share of GDP	%
9.4	Telecommunications investments as a share of GFCF	%

ANNEX B

(to Recommendation C.1)

Yearbook of common carrier telecommunication statistics

Definitions, instructions and explanatory notes
on how the information should be provided

General remarks

By "common carrier telecommunication" is meant the traditional field of telecommunication: telephony, telegraphy, telex and data transmission. As telecommunications undertakings in some countries are responsible for providing and maintaining sound broadcasting facilities and sometimes also for the collection of charges for these services, it is stipulated that neither these, nor the investments, income or expenditure for the service in question should be taken into account.

When items of statistics are presented in a different manner from that specified in this Annex, they should be accompanied by an explanation which facilitates their interpretation.

A. SIZE OF TELECOMMUNICATION SYSTEMS, TRAFFIC AND STAFF

1 Telephone service*Preliminary remarks*

Common carrier telecommunications provide the inhabitants of a country with services involving access to the network and the possibility of sending traffic with a certain grade of service.

Access to the network is provided by switching exchanges with a certain access capacity, not all of which may be made available to users. These exchanges may be operated either manually or automatically.

The first characteristic of the size of a system from the traffic point of view is therefore the number of connection points to the network, i.e. *main lines*.

The second characteristic of the size of the system is the number of points of access to the network, i.e. *telephone sets*.

The traffic introduced at the points of access to a network is routed between the different switching exchanges by manually or automatically operated circuits.

1.1 Size of telephone system**1.1.1 Telephone stations (sets) of all kinds connected to the public network**

Under this heading should be indicated the total number of telephone sets which have access to the public switched network.

1.1.2 Main lines

A "main line" is a telephone line connecting the subscriber's terminal equipment to the public switched network and which has a dedicated port in the telephone exchange equipment. This term is synonymous with the term "main station" which is commonly used in telecommunication documents.

It is understood that:

- the line connected to the telephone exchange may be either an exclusive exchange line or a shared line;
- when a subscriber's equipment has several extensions (private branch exchange), the number of main lines is equal to the number of lines connecting the installation to the telephone exchange, whether these lines are operated in one direction or in both directions.

Example:

A subscriber's equipment with extensions is served by 50 lines which connect it to the telephone exchange. The installation has ten operating positions (and therefore ten "operator's stations") and 500 extensions. In accordance with the above definition this installation must be counted as having *50 main lines* (i.e. as many as there are lines connecting the subscriber installation to the exchange).

In other words, it will not be counted as having:

- either *one* main line (which would refer to the installation),
- or *ten* main lines (which would correspond to the number of operator's stations).

It will thus be seen that according to this definition the number of main lines to be entered in the Statistics is equal to the number of individual lines connected to the exchange.

1.1.3 Main lines connected to private branch exchanges (PBX, etc.)

The number of these lines corresponds to the number of exchange lines connecting the PBX, etc. to the exchange.

1.1.4 Percentage of main lines connected to automatic exchanges

This percentage is obtained by dividing the number of main lines connected to automatic telephone exchanges by the total number of main lines.

1.1.5 Percentage of main lines equipped for direct customer dialling to international destinations

This percentage is obtained by dividing the number of main lines with access to the automatic international service by the total number of main lines.

1.1.6 Percentage of main lines which are residential

This percentage is obtained by dividing the number of main lines serving households (i.e. lines which are not used for professional purposes or as public telephone stations) by the total number of main lines.

1.1.7 Connection capacity at local public switching exchanges

The total capacity of public switching exchanges corresponds to the maximum number of main lines which can be connected. This number includes, therefore, main lines already connected and main lines available for future connection, including those used for the technical operation of the exchange (test numbers).

1.1.8 } *Trunk and international circuit ends*
1.1.9 }

Under these two headings should be indicated the total number of trunk and international circuits¹⁾ terminating at switching exchanges; no account should be taken of whether the circuit is incoming, outgoing or both-way, nor of the type of trunk or international exchange at the other end of the circuit, nor whether the other end is located within the same or another country.

The only distinction to be made is between the classes of operational use of these circuits, according to whether they are to be used for:

- a) manual operation²⁾
- b) semi-automatic or automatic operation²⁾

1.2 *Volume of the demand for telephone connection and size of the waiting list*

Requests for connection and waiting list for the telephone service refer to applications for a main line.

1.2.1 *New applications for main lines*

New applications for main lines are applications submitted for the first time.

1.2.2 *Total demand for main lines (including transfers)*

The total demand includes new applications and applications for transfer. A transfer application is an application submitted by the holder of a main line who wants it to be transferred from one place to another.

1.2.3 *Waiting list for main lines*

The waiting list comprises applications for connection which have had to be held over owing to a lack of technical availabilities (equipments, lines, etc.).

Each country should specify in a footnote the period (in days, weeks or months), counting from the date on which the application is submitted, beyond which applications are considered as being on the waiting list.

1.3 *Telephone traffic*

Depending on the type of telephone exchange equipment, telephone traffic can be measured by the number of calls, by the number of charged pulses or, in certain cases, by the number of charged minutes. It is preferable to provide the number of calls, even if this has to be estimated. In any case, the applied unit must be indicated.

Calls actually set up (successful calls) are classified in two categories for charging purposes: chargeable calls and non-chargeable calls. Non-chargeable calls include "service" calls made from Administration service stations, emergency, directory assistance calls or other facility calls (where these are not charged for) and test calls for the technical monitoring of equipment.

1.3.1 *Total national traffic*

This covers all the effective (completed) traffic which both originates and terminates within the same country.

1.3.1.1 *Local traffic*

Local traffic consists of effective (completed) traffic exchanged within the local charging area in which the calling station is situated. This is the area within which one subscriber can call another on payment of the local charge (if applicable).

Each country should include a footnote explaining what it understands by the "local charging area" and indicating the number of such areas and their average size (in km²).

1.3.1.2 *National trunk (toll) traffic*

National trunk (toll) traffic consists of effective (completed) national traffic exchanged with a station outside the local charging area of the calling station.

1.3.2 *Total outgoing international traffic*

This covers all the effective (completed) traffic originating in a given country to destinations outside that country.

1.3.3 *Total traffic*

Total traffic is the sum of national traffic (§1.3.1) and outgoing international traffic (§1.3.2).

¹⁾ Telephone circuit (international or trunk circuits) is defined in CCITT Recommendation E.100 (Fascicle II.2 of the *Yellow Book*).

²⁾ International circuits are designated in different ways by the technical services depending on how they are used (see CCITT Recommendation M.140, §§1.1.1, 1.1.2 and 1.1.3 [Fascicle IV.1 of the *Yellow Book*]).

1.3.4 *Outgoing international subscriber dialled telephone traffic as a percentage of total outgoing international telephone traffic*

This is obtained by dividing the volume of automatic international outgoing traffic, i.e. the fully automatic traffic, by the total volume of international outgoing traffic.

2 **Public telegram service**

The public telegram service is concerned with the reproduction at a distance of documentary matter such as written, printed or pictorial matter. A pictorial document reproduced is a phototelegram. The traffic is measured by the number of telegrams or phototelegrams.

Note – It must not be confused with the public facsimile service, the traffic for which must not be included.

2.1 *National paid telegrams*

The number of charged telegrams which both originate and terminate within the same country.

2.2 *International outgoing full rate telegrams*

The number of charged outgoing full rate telegrams originating in a given country with a destination outside the country.

2.3 *International outgoing LT telegrams*

The number of outgoing reduced rate telegrams (letter-telegrams) originating in a given country with a destination outside the country.

2.4 *Outgoing international phototelegrams*

The number of paid outgoing phototelegrams originating in a given country with a destination outside the country.

3 **Telex service**

3.1 *Size of telex system*

3.1.1 *Subscriber line*

A subscriber line is a line connecting the subscriber's terminal equipment to the public telex network and which has a dedicated port in the telex exchange equipment.

3.2 *Telex traffic*

Telex traffic is measured by the number of calls, by the number of charged pulses or in certain cases by the number of charged minutes. It is preferable for the information to be supplied in charged minutes. In any case, the applied unit must be indicated.

3.2.1 *National traffic*

All the traffic which both originates and terminates within the same country.

3.2.2 *Outgoing international traffic*

All the outgoing traffic originating in a given country with a destination outside the country.

3.2.3 *Total traffic*

Total traffic is the sum of national traffic and outgoing international traffic.

4 **Data transmission**

4.1 *Size of data system*

4.1.1 Number of data terminal equipments on the public telephone and telex networks.

4.1.2 Number of private leased circuits.

4.1.3 Number of data terminal equipments connected to dedicated public data networks.

5 **Equivalent full-time telecommunication staff**

The definitions applied to staff in some countries might differ to a greater or lesser extent from those in the Yearbook. It is therefore very important that such differences be explained.

5.1 *Total staff in telecommunications services*

Full-time equivalent staff of either sex employed by the telecommunication enterprises in the country for the common carrier telecommunication services.

5.2 *Operating staff*

Full-time equivalent staff employed by the telecommunications Administration/enterprise itself for:

- setting up of telephone and telex calls and the transmission and distribution of telegrams,
- answering requests for information in the switching exchanges (e.g. directory assistance),
- auxiliary work directly related to the above tasks and performed by the same grade of staff (e.g. exchange clerical work performed by operating staff),
- supervisory duties.

5.3 *Technical staff*

Full-time equivalent staff employed by the telecommunications Administration/enterprise itself for the installation, upkeep, maintenance and repair of telecommunications plant and lines.

5.4 *Other staff*

Full-time equivalent staff employed by the telecommunications Administration/enterprise itself for:

- management and administration,
- research and development,
- public relations,
- budgeting and accounting,

other support functions:

B. DEMOGRAPHIC, ECONOMIC AND FINANCIAL INFORMATION

6 Demographic and macro-economic data

Since the information about demographic and macro-economic data comes from sources outside the telecommunication services, the definitions and numerical information are those used in the Yearbook of National Accounts Statistics published by the United Nations Organizations. The financial information should be given in the national currency at current prices.

7 Income, expenditure and financial results of telecommunication services

The concepts of income, expenditure and financial results of telecommunication services depend on the legal, financial and accounting framework within which the telecommunication services are operated in each country.

7.1 to 7.5 *Income*

Income consists of all telecommunication revenue earned during the financial year under review. This may include income from subscribers, other national and foreign telecommunication Administrations, governments, etc., after deduction of the share of this income to be paid to other Administrations or organizations for outgoing telecommunication traffic (Administrations of the incoming and possibly transit countries).

It does not, however, include monies received in respect of revenue earned during previous financial years, neither does it include monies received by way of loans from governments, investors or money markets, nor monies received from repayable subscribers' contribution or deposits.

7.6 *Total current expenditure for all telecommunication services*

Generally speaking, the total disbursements should be broken down into capital expenditure for investments and current expenditures. The investment concept is explained in the paragraphs which follow.

Current expenditure means expenditure other than investments; it consequently refers to the running of telecommunication services on an annual basis and comprises, for instance the elements mentioned below under 7.6.1 to 7.6.5:

7.6.1 *Operational expenditure*

- on salaries, etc. of operational staff, cost of material for operational purposes, etc.,
- labour and material costs of maintenance and repair of the existing system.

7.6.2 *Depreciation*

Depreciation means the financial charge made in the year for the loss of value of installed equipment and is normally calculated on hypotheses based on the useful life of the different categories of equipment.

7.6.3 *Interest*

Interest refers to the financial year for loans associated with fixed and current assets.

7.6.4 *Taxes*

Taxation refers to taxes on the Administration's income, expenditure, profit or capital (e.g. corporation tax, income tax, excise taxes, non-recoverable VAT and local land taxes) raised by central or local government. This item does not include pay-related (e.g. social) taxes.

7.6.5 *Other expenditure*

"Other expenditure" means current expenditure which cannot be regarded as connected with operation, depreciation, interest or taxation. (N.B. It does not include expenditure on capital items.)

8 **Investments (annual gross construction expenditure) on telecommunication services**

The term "investments" generally means the expenditure associated with acquiring the ownership of property and plant. These include expenditure on initial installations and on additions to existing installations where the usage is expected to be over an extended period of time.

A distinction must be made between gross investment and net investment (after deduction of depreciation). It proved impossible to apply the concept of net investment, because of the considerable differences in the interpretation of the concept of depreciation in the telecommunication sector.

9 **Comparative ratios**

- 9.1 Item 1.1.2/Item 6.1 expressed in %.
- 9.2 Item 1.1.1/Item 6.1 expressed in %.
- 9.3 Item 8.1/Item 6.3 expressed in ‰.
- 9.4 Item 8.1/Item 6.4 expressed in ‰.

