



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

M.570

**MAINTENANCE :
INTERNATIONAL TELEPHONE CIRCUITS**

**CONSTITUTION OF THE CIRCUIT;
PRELIMINARY EXCHANGE OF INFORMATION**

ITU-T Recommendation M.570

(Extract from the *Blue Book*)

NOTES

- 1 ITU-T Recommendation M.570 was published in Fascicle IV.1 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).
- 2 In this Recommendation, the expression “Administration” is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

© ITU 1988, 1993

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

**CONSTITUTION OF THE CIRCUIT;
PRELIMINARY EXCHANGE OF INFORMATION**

1 As soon as it is decided to bring a new circuit into operation, the technical services of the terminal countries should agree upon the circuit control station, and the technical service of each transit country should advise the other technical services concerned of the name of the sub-control station chosen for its territory. If the circuit is routed in a direct group or block crossing a transit country without demodulation or demultiplexing, no sub-control station need be provided for the transit country. When a circuit is subjected to analogue-to-digital conversion using, for example, a transmultiplexer, the location of the transmultiplexer should be designated as circuit sub-control station.

Also the technical services of all the countries concerned should send to the technical service responsible for the circuit control station information which will be required for the preparation of the circuit routing form (see the Appendix I to this Recommendation) using the letter and number code on the form. The information for a circuit without audio sections will consist of the numbers of the groups or blocks used and the number of the channel in each group or block.

In the case of a both-way circuit, the circuit order of selection should be stated, including the method by which the International Switching Centre selects circuits (i.e., sequentially by circuit, fully randomly or sequentially by block of circuits but randomly within the block, etc.).

When the circuit is assigned its designation (according to Recommendation M.140, § 1), the Administration with control station responsibility will assemble the necessary technical and operational information. This should be entered into the list of Related Information (as defined in Recommendation M.140, § 2) which consists of the items shown in Annex A.

2 Exchange of information

The information should preferably be sent by telex and the examples below show typical telex messages concerning the provision of Bucuresti-London 1 when the circuit is analogue, digital or mixed analogue/digital.

This method using the telex services enables agreement on routing details to be obtained quickly and also enables circuit routing forms to be completed by the technical services responsible for the circuit control stations as soon as a circuit is put into service or rearranged.

Example I – Telex message from the technical services of the United Kingdom to the technical services of the Federal Republic of Germany, Austria, Hungary and Romania for an analogue circuit:

NETWORK CONTROL DIVISION BTI LONDON TO FTZ DARMSTADT
GENTEL WIEN
GENTEL BUDAPEST
GENTEL BUCUREȘTI

OUR REF.

PROPOSE PROVISION OF BUCUREȘTI/A1 – LONDON/M B1
USING FRANKFURT – LONDON 1201/9 SIGNALLING 500/20
GRATEFUL FOR YOUR AGREEMENT OR COUNTER PROPOSALS. REGARDS.

Example II – Telex message from the technical services of the Federal Republic of Germany in reply to telex in example I:

FTZ SCHALT DMST A NETWORK CONTROL DIVISION BTI LONDON

10 APR

YOUR REF.

OUR REF.

2 = FEDERAL REPUBLIC OF GERMANY 3 – BUCUREȘTI – LONDON 1

5 = FRANKFURT/MAIN

A = FFT – L 1201/9 B = 840

A = FFT – WIEN 1201/11 B = 740

REGARDS.

COPIES TO WIEN, BUDAPEST, BUCUREȘTI.

Similar messages could be used for a digital circuit. The channel to be used then could be, for example, Frankfurt-London 30N003/22.

Example III – Telex message from the technical services of the United Kingdom to the technical services of the Federal Republic of Germany, Austria, Hungary, and Romania for a mixed analogue/digital circuit using a transmultiplexer at Frankfurt:

NETWORK CONTROL DIVISION BTI LONDON TO FTZ DARMSTADT
GENTEL WIEN
GENTEL BUDAPEST
GENTEL BUCUREȘTI

OUR REF.

PROPOSE PROVISION OF BUCUREȘTI – LONDON 1
USING FRANKFURT – LONDON 30NC004/7 SIGNALLING SYSTEM No.5
GRATEFUL FOR YOUR AGREEMENT OR COUNTER PROPOSALS. REGARDS.

Example IV – Telex message from the technical services of the Federal Republic of Germany in reply to the telex in Example III:

FTZ SCHALT DMST TO NETWORK CONTROL DIVISION BTI LONDON

10 APR

YOUR REF.

OUR REF.

2 = FEDERAL REPUBLIC OF GERMANY

5 = BUCUREȘTI – LONDON 1

3 = FRANKFURT/MAIN

19 = FRANKFURT/MAIN

A = FFT – L 30N0004/7 B = 840

A = FFT – WIEN 12008/7 B = 740

REGARDS.

COPIES TO WIEN BUDAPEST, BUCUREȘTI.

Using the above-mentioned information and the data supplied by sub-control stations, the circuit control station makes out a *circuit routing form* which is used as a level diagram for voice-frequency sections (see Appendix I to this Recommendation, which can serve as a routing form or level diagram). This routing form shows the nominal relative levels at:

- circuit control and sub-control stations;
- frontier stations, if the circuit is reduced to a voice-frequency section across a frontier;
- stations where the circuit is reduced to voice frequency, in those cases where the circuit passes via a series of groups or blocks.

The technical service of the circuit control station sends the routing form to the technical services of the sub-control stations of the international circuit concerned:

- a) only at the specific request of one of the Administrations concerned when the circuits are routed on one channel of a single international group link or digital path;
- b) in all cases for circuits otherwise constituted.

The despatches are sent in duplicate, one copy for the technical service and one for the sub-control station.

ANNEX A

(to Recommendation M.570)

Designation information on international public switched circuits

A.1 *Designation*

The designation is according to Recommendation M.140, § 1.

A.2 *Related information*

The additional information on public switched circuits is covered by the following items:

- RI 1. Urgency for restoration;
- RI 2. Terminal countries;
- RI 3. Carriers' names;
- RI 4. Control and sub-control station(s);
- RI 5. Fault report points;
- RI 6. Routing;
- RI 7. Association;
- RI 8. Equipment information;
- RI 9. Use;
- RI 10. Transmission medium information;
- RI 11. Composition of transmission;
- RI 12. Bandwidth or bit rate;
- RI 13. Signalling information;

The various items will be dealt with in § 2 of Recommendation M.140.

APPENDIX I

(to Recommendation M.570)

Routing form for an international circuit

1. Date of.....
2. Technical service of American Telephone & Telegraph Co.
3. Circuit designation New York (10) – Stockholm 1
4. Length 7870 km
- 5a. Control station..... New York
- 5b. Sub-control stations..... London, Stockholm
6. Date of putting into service October 1972
7. Type of ISC at control station end..... Analogue
8. Type of ISC at sub-control station end..... Analogue
- 9a. Echo suppressors at New York (½), Stockholm (½)
- 9b. Echo cancellers at..... None
10. Compandors at None
11. Signalling System No. 5
12. Switching equipment.....
13. Special equipment at None
14. Special concentrator¹ None
15. Estimated weighted noise power –48 dBm0 (36 dBa)
16. Special performance requirements at None
17. Hangover time of suppressors at New York: 50 ms
Stockholm: 50 ms
18. Estimated total distortion power Not applicable
19. Transmultiplexer at None
20. Echo cancellation stages at.....
21. Echo path delay characteristics, per state, at

Stations and constitution	Length of section (in km)	Nominal relative level at reference measurement point ² (dBr)		Estimated group delay time at 1020 Hz (milliseconds)	Remarks ³
		Direction↓	Direction↑		
(A)	(B)	(C)	(D)	(E)	(F)
New York		0.0	–4.5		Through-group connection points Conil (Spain) Sesimbra (Portugal)
34-A/-C/-8	522			3.2	
Green Hill		+7.0	+7.0		
1602-05-/A/-5	5813			36.5	
London		+4.0	–4.0		
1211/1	1535			9.5	
Stockholm		+3.5	–11.0		

¹ Insert *CMS only, through and CMS*, or *none* as appropriate (or equivalent).

² An asterisk after the relative level indicates that the nominal value of the impedance at the measuring point differs from 600 ohms.

³ When this column is completed for loaded cables the effective bandwidth of the section will be inserted.