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**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**M.70**

**MAINTENANCE : INTRODUCTION  
AND GENERAL PRINCIPLES**

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**GUIDING PRINCIPLES  
ON THE GENERAL MAINTENANCE  
ORGANIZATION FOR TELEPHONE - TYPE  
INTERNATIONAL CIRCUITS**

**ITU-T Recommendation M.70**

(Extract from the *Blue Book*)

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## NOTES

- 1 ITU-T Recommendation M.70 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.

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## Recommendation M.70

### GUIDING PRINCIPLES ON THE GENERAL MAINTENANCE ORGANIZATION FOR TELEPHONE-TYPE INTERNATIONAL CIRCUITS

#### 1 General

In order to furnish guiding principles to Administrations, the CCITT recommends the following principles for the general maintenance organization for international circuits.

1.1 Definitions relating to the various maintenance elements, each representing a set of functions, are given in Recommendations M.710 to M.725 for automatic circuits, and in Recommendations M.1012 [1], M.1013 [2], M.1014 [3] for leased and special circuits.

1.2 The size and complexity of the maintenance organization will depend on the particular case and the particular country concerned. In some instances it may be possible to carry out all sets of functions from a single location; in others only some of the functions might be combined and carried out from one location. The precise arrangement will depend on the Administration concerned, and the CCITT limits itself to defining the functions of the separate elements, leaving the manner in which the elements are grouped to be determined by the Administration.

1.3 If a country so desires and/or if it judges that the complexity of its international telecommunications so requires, the international maintenance organization can be responsible for all types of circuit for which Study Group IV makes recommendations.

#### 2 Types of circuits to be catered for

The types of circuits to be catered for are as follows:

public circuits:

- telephone circuits,
- voice-frequency telegraph circuits,
- phototelegraph circuits,
- sound-programme circuits, etc.;

leased circuits:

- telephone circuits: point-to-point and multiterminal,
- voice-frequency telegraph circuits,
- data circuits: point-to-point and multiterminal,
- multi-facility circuits, that is, phototelegraph plus voice-frequency telegraph; speech plus voice-frequency telegraph; simultaneous or alternative transmission,
- phototelegraph circuits,
- sound-programme circuits, etc.

#### 3 Maintenance organization

The maintenance of international public telephone circuits relies upon the ability of each Administration to fulfil the various functions and responsibilities noted in the Series M Recommendations. Where such circuits are manual, as opposed to automatic, it is assumed that the Administration will select and provide the relevant elements such as the *fault report point (circuit)* and the *testing point (transmission)* together with *circuit control* and *sub-control station* assignments as appropriate.

For automatic circuits all the elements noted in Recommendation M.710 apply.

Leased and special international circuits require the services of a Transmission Maintenance Point (International Line) (TMP-IL) which is described in Recommendation M.1014 [3]. The circuit control and sub-control functions and responsibilities on leased and special international circuits are noted in Recommendations M.1012 [1] and M.1013 [2] and include a close cooperation with the TMP-IL.

For operations at other levels (group, supergroup, etc.), specific responsibilities are allotted to particular repeater stations. At each level, maintenance is based on the appointment of a *control station* and one or more *sub-control stations*. Additional information concerning control and sub-control stations follows in Recommendations M.80 and M.90 and is supplemented by that contained in Recommendations M.1012 [1] and M.1013 [2], M.723, M.724, N.5 [4] and N.55 [5].

The attention of Administrations is drawn to the need for exchanging contact forms (similar to those for maintenance units for automatic circuits as described in Recommendation M.93) which give telephone numbers, staffing hours, etc. for units involved in the maintenance of leased circuits and the higher order transmission systems.

### **References**

- [1] CCITT Recommendation *Circuit control station for leased and special circuits*, Vol. IV, Rec. M.1012.
- [2] CCITT Recommendation *Sub-control station for leased and special circuits*, Vol. IV, Rec. M.1013.
- [3] CCITT Recommendation *Transmission maintenance point (international line) (TMP-IL)*, Vol. IV, Rec. M.1014.
- [4] CCITT Recommendation *Sound programme control, sub-control and send reference stations*, Vol. IV, Rec. N.5.
- [5] CCITT Recommendation *Organization, responsibilities and functions of control and sub-control stations for international television connections, links, circuits and circuit sections*, Vol. IV, Rec. N.55.