INTERNATIONAL TELECOMMUNICATION UNION

CCITT

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

M.1130

(10/92)

MAINTENANCE: MOBILE TELECOMMUNICATIONS SYSTEMS AND SERVICES

GENERAL DEFINITIONS AND GENERAL PRINCIPLES OF OPERATION/MAINTENANCE PROCEDURES TO BE USED IN SATELLITE MOBILE SYSTEMS

Recommendation M.1130

FOREWORD

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Recommendation M.1130 was prepared by Study Group IV and was approved under the Resolution No. 2 procedure on the 5th of October 1992.

CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

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GENERAL DEFINITIONS AND GENERAL PRINCIPLES OF OPERATION/MAINTENANCE PROCEDURES TO BE USED IN SATELLITE MOBILE SYSTEMS

(1992)

Abstract: This Recommendation summarizes the main definitions and general principles of the maintenance/operations procedures.

Keywords: Satellite Mobile Systems Definitions/General Principles.

The purpose of this Recommendation is to summarize the main definitions and the general principles of the maintenance/operation procedures, which can be applied to any satellite mobile systems (maritime, aeronautical and land); in particular the definitions are in accordance with the last Radio Regulations issue of ITU, except for minor editorial changes.

a) **mobile-satellite service** is a radiocommunication service

- between mobile earth stations and one or more satellite; or
- between mobile earth stations by means of one or more satellite.

This service normally includes feeder links, necessary to connect the mobile earth station with fixed end users on the ground.

b) **land earth station** (LES) is an earth station in the fixed satellite service or, in some cases, in the mobile-satellite service, located at a specified fixed point (or within a specified area) on land to provide a feeder link for the mobile-satellite service.

b.1) **coast earth station** (CES) is a land earth station, as defined in point b), to provide a feeder link for the maritime mobile-satellite service.

b.2) **aeronautical (ground) earth station** (GES) is a land earth station, as defined in point b), to provide feeder link for the aeronautical mobile-satellite service.

b.3) **base earth station** (BES) is a land earth station, as defined in point b), to provide a feeder link for the land mobile service.

c) **mobile earth station** (MES) is an earth station in the mobile-satellite service, intended to be used while in motion or stationary at unspecified points.

c.1) **ship earth station** (SES) is a mobile earth station, as defined in point c), located on board of a ship.

c.2) **aircraft earth station** (AES) is a mobile earth station, as defined in point c), located on board of an aircraft.

c.3) **land mobile earth station** (LMES) is a mobile earth station, as defined in point c), capable of surface movement within the geographical limits of a country or a continent.

It should be recognized that the services offered by mobile systems (e.g. voice, data, telex, etc.) are being specified such that they will be, as far as practical, the same as those services offered on the fixed network with the same operational procedures (tones, announcements, signals, etc.) being recognized and returned where appropriate. In the network designs there should be no restrictions to establishing international calls between mobile terminals in different mobile systems via the relevant fixed network(s). For example, a user of a terrestrial based mobile terminal should be able to make an international connection to a satellite based mobile terminal using the established international call set-up procedures (see Recommendations F.111 [1] and E.220 [2]).

With reference to the general principles to be applied in the operational/maintenance procedures the aim of the mobile-satellite system operator(s) should be to ensure the best performance of the service from the point of view of the

– quality of the signal;

– availability and reliability of the system.

This implies specific choices on

– the sparing philosophy of the space segment;

– restoration plans between LES operators;

– periodic maintenance actions to be performed on LES and MES.

Considering that the satellite mobile services (maritime, aeronautical and land) could face quite different operational and maintenance issues, these matters are specifically referred to in other M-Series Recommendations on mobile telecommunications systems and services.

References

[1] CCITT Recommendation F.111 *Principles of service for mobile systems*.

[2] CCITT Recommendation E.220 *Interconnection of land mobile systems.*