



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

E.413

TELEPHONE NETWORK AND ISDN

**QUALITY OF SERVICE, NETWORK MANAGEMENT
AND TRAFFIC ENGINEERING**

**INTERNATIONAL NETWORK MANAGEMENT -
PLANNING**

ITU-T Recommendation E.413

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation E.413 was published in Fascicle II.3 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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INTERNATIONAL NETWORK MANAGEMENT – PLANNING

1 Introduction

1.1 Many situations arise which may result in anormally high or unusually distributed traffic levels in the international network, or loss of network capacity, or both. These situations include the following:

- peak calling days,
- failure of transmission systems (including planned outages),
- failure of exchanges,
- failure of common channel signalling systems,
- mass-calling situations,
- disasters,
- introduction of new services.

Experience has shown that advanced planning for these situations has a beneficial effect on overall network management efficiency and effectiveness. The timely application of planned control strategies can be instrumental in improving network performance.

1.2 For known or predictable events, predetermined network management plans should be developed and agreed between Administrations, bearing in mind the costs involved. The degree of detail of any plan will depend on the type of situation to be covered. For example, a recurring event such as Christmas or New Year's Day may be planned in great detail. The lack of real-time network management facilities in an Administration should not prelude planning activities.

1.3 When unforeseen situations arise for which predetermined plans do not exist, ad hoc arrangements will need to be agreed at the time. Whether network management actions result from a negotiated plan, or an ad hoc arrangement, it is essential that agreement be reached between Administrations concerned before such actions are actually implemented.

1.4 Network management planning is normally performed by the “network management planning and liaison” point (see Recommendation E.414).

1.5 Another aspect of network management planning is long-range planning for the development and introduction of new network management techniques and capabilities for surveillance and control. This includes the development of new or improved controls which may be necessary due to the introduction of new services or the transition to ISDN. These functions are normally performed by the “network management development” point (see Recommendation E.414).

2 Development of plans

2.1 A comprehensive network management plan would include some or all of the following, as appropriate:

- Key indicators or criteria which should be used to decide when a plan should be implemented.
- The identification of destinations or points likely to be affected, along with an assessment as to the likely impact on originating and/or terminating traffic.
- Control actions which may be required or that should be considered locally and in distant locations. This includes the identification of temporary alternative routings which may be available for use, and the modifications to automatic controls which may be necessary.
- Special call handling procedures to be used by operators, and notification requirements.
- Communication requirements. This includes identification of the necessary information flows between the network management centre and other organizations which may be involved or may have information concerning the problem (such as maintenance and operator centres).
- Data requirements. This includes determining what information may be relevant and where it is available.
- Key events or milestones. These are critical elements which can measure the success or progress of a plan, and indicate when certain actions should begin or end.