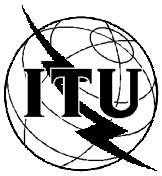

INTERNATIONAL TELECOMMUNICATION UNION

ITU-T E.750

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(03/93)

TELEPHONE NETWORK AND ISDN

QUALITY OF SERVICE, NETWORK MANAGEMENT AND TRAFFIC ENGINEERING

INTRODUCTION TO THE E.750-SERIES OF RECOMMENDATIONS ON TRAFFIC ENGINEERING ASPECTS OF MOBILE NETWORKS

ITU-T Recommendation E.750

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation E.750 was prepared by the ITU-T Study Group II (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

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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INTRODUCTION TO THE E.750-SERIES OF RECOMMENDATIONS ON TRAFFIC ENGINEERING ASPECTS OF MOBILE NETWORKS

(Helsinki, 1993)

1 Introduction

This Recommendation is the first of a Series of Recommendations, the E.750-Series (Recommendations E.750 to E.799), dealing with the traffic engineering aspects of mobile systems with initial emphasis on the impact on the fixed PSTN/ISDN network. This recognizes the use of radio technology as either a separate or integral part of PSTN/ISDN.

Mobile services are expanding at a very high rate all over the world and mobile related traffic is forecast to represent a significant share of the overall traffic increase in the years to come. A parallel increase is also being expected in the radio coverage, with incurred consequences on the fixed network infrastructure. This situation will lead to an impact of mobile related traffic on the fixed network which should be measured, forecast and appropriately handled, to ensure that it does not create service impairment.

Consideration of mobile traffic peculiarities and control, and identification of teletraffic interfaces between mobile and fixed network domain are important problems to be faced in view of the variety of and the pace at which different architecture and scope for mobile systems are being proposed worldwide.

This Recommendation outlines the scope of the E.750-Series.

2 Scope of E.750-Series

The E.750-Series is:

- initially limited to public land mobile services, i.e. those offered by cellular, cordless, or paging. Expansion to other mobile services is for further study;
- intended to eventually encompass satellite based systems, including maritime and aeronautical systems;
- intended to cover traffic engineering issues only. It addresses circuit switched traffic and common channel signalling traffic; packet switched connections are for further study.

The Recommendations are applicable to both existing or near-term mobile systems, such as Japan's MCS-L2 system, the North American AMPS and IS-54 systems, the European GSM digital system, and to such systems as FPLMTS (Future Public Land Mobile Telecommunication Systems) being investigated within CCIR TG 8-1 (formerly IWP 8/13), and RACE UMTS (Universal Mobile Telecommunication System). Interworking with B-ISDN (including MANs), is for further study.

3 Organization and content of E.750-Series

Figure 1 shows the organization of the E.750-Series, traffic engineering aspects of mobile networks. One of the objectives of E.750-Series is the characterization of the mobile related traffic, both in the user and in the control plane, at the interface where mobile and fixed networks interconnect.

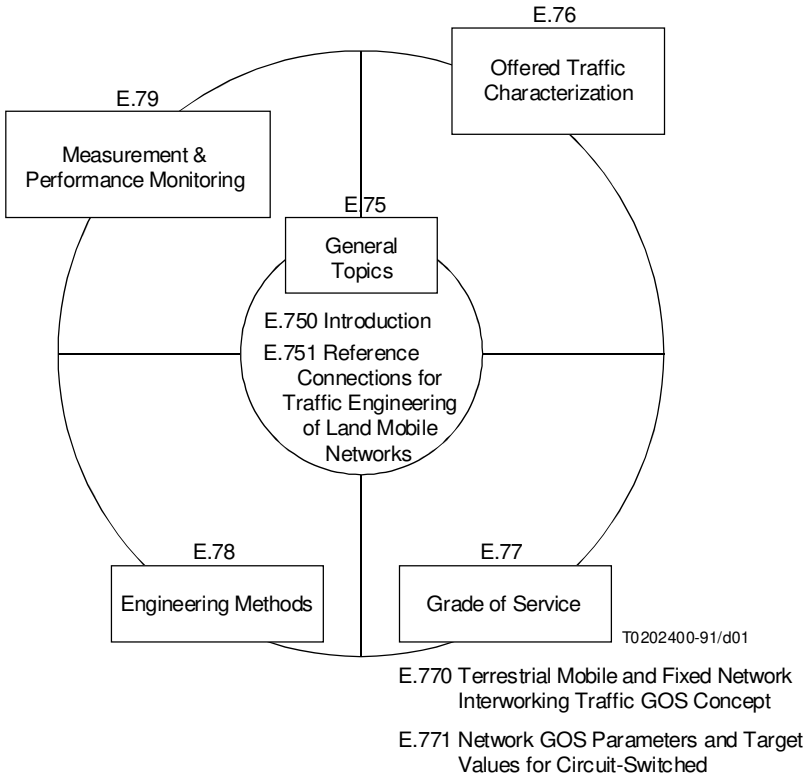

FIGURE 1/E.750

Organization and existing draft Recommendations in the E.750 Recommendation Series

The E.750-Series will model traffic processes using the user plane and control plane notions in a similar fashion as done in the E.700-E.749-Series of Recommendations on traffic engineering of the ISDN.

Due to the peculiarities of the radio environment and the mobile services, several issues (like location tracking, channel quality monitoring, handover handling, etc.) not relevant for fixed networks have to be considered for characterizing the mobile related traffic. Such issues normally add to those necessary to describe fixed network related traffic.

The following Recommendations are envisaged:

General:	Recommendations E.750 to E.759
Traffic modelling:	Recommendations E.760 to E.769
Grade of Service:	Recommendations E.770 to E.779
Dimensioning methods:	Recommendations E.780 to E.789
Traffic measurements:	Recommendations E.790 to E.799

Existing Recommendations are:

E.750: Introduction to the E.750-Series of Recommendations on traffic engineering aspects of mobile networks

E.751: Reference connections for traffic engineering of land mobile networks

E.770: Land mobile and fixed network interconnection traffic Grade of Service concept

E.771: Network Grade of Service parameters and target values for circuit-switched land mobile services

4 Related Recommendations

Related Recommendations are quoted in Recommendation E.201. E.201 is a useful guide and reference document for the overall subject of mobile systems and services. Finally, Recommendations E.710, E.711, E.712 and E.713 are a reference for traffic modelling.

5 History

Recommendation first published in 1993.

6 Bibliography

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