



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

M.1300

(10/97)

SERIES M: TMN AND NETWORK MAINTENANCE:
INTERNATIONAL TRANSMISSION SYSTEMS,
TELEPHONE CIRCUITS, TELEGRAPHY, FACSIMILE
AND LEASED CIRCUITS

International data transmission systems

**Maintenance of international data transmission
systems operating in the range 2.4 kbit/s to
140 Mbit/s**

ITU-T Recommendation M.1300

(Previously CCITT Recommendation)

ITU-T M-SERIES RECOMMENDATIONS

TMN AND NETWORK MAINTENANCE: INTERNATIONAL TRANSMISSION SYSTEMS, TELEPHONE CIRCUITS, TELEGRAPHY, FACSIMILE AND LEASED CIRCUITS

Introduction and general principles of maintenance and maintenance organization	M.10–M.299
International transmission systems	M.300–M.559
International telephone circuits	M.560–M.759
Common channel signalling systems	M.760–M.799
International telegraph systems and phototelegraph transmission	M.800–M.899
International leased group and supergroup links	M.900–M.999
International leased circuits	M.1000–M.1099
Mobile telecommunication systems and services	M.1100–M.1199
International public telephone network	M.1200–M.1299
International data transmission systems	M.1300–M.1399
Designations and information exchange	M.1400–M.1999
International transport network	M.2000–M.2999
Telecommunications management network	M.3000–M.3599
Integrated services digital networks	M.3600–M.3999
Common channel signalling systems	M.4000–M.4999

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION M.1300

MAINTENANCE OF INTERNATIONAL DATA TRANSMISSION SYSTEMS OPERATING IN THE RANGE 2.4 kbit/s TO 140 Mbit/s

Summary

This Recommendation provides a general description of international data transmission systems with a PDH presentation to the renter and of the basic requirements for their effective operation.

Source

ITU-T Recommendation M.1300 was revised by ITU-T Study Group 4 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 24th of October 1997.

Keywords

International data transmission links, international data transmission systems, international leased circuits.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. 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, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

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

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

© ITU 1998

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.

CONTENTS

	Page
1 Scope	1
2 References	1
3 Terminology and definitions	2
4 Abbreviations	2
5 Operational procedures.....	3
6 Performance limits.....	3
7 General description of international data transmission systems.....	3
8 General description of international data transmission links.....	9
9 Timing sources	11
10 Control and sub-control stations.....	11
11 Reserve arrangements.....	11
12 Designations	11

Recommendation M.1300**MAINTENANCE OF INTERNATIONAL DATA TRANSMISSION SYSTEMS OPERATING
IN THE RANGE 2.4 kbit/s TO 140 Mbit/s***(Published 1984; revised 1988, 1992 and 1997)***1 Scope**

This Recommendation defines international data transmission systems with a PDH presentation to the renter. The international data transmission system is transported via an international data transmission link, which may typically be provided on a variety of transmission media using a number of network technologies.

2 References

The following ITU-T Recommendations contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- [1] CCITT Recommendation G.703 (1991), *Physical/electrical characteristics of hierarchical digital interfaces.*
- [2] ITU-T Recommendation G.704 (1995), *Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels.*
- [3] CCITT Recommendation G.732 (1988), *Characteristics of primary PCM multiplex equipment operating at 2048 kbit/s.*
- [4] ITU-T Recommendation G.736 (1993), *Characteristics of a synchronous digital multiplex equipment operating at 2048 kbit/s.*
- [5] CCITT Recommendation G.751 (1988), *Digital Multiplex equipments operating at the third order bit rate of 34 368 kbit/s and the fourth order bit rate of 139 624 kbit/s and using positive justification.*
- [6] CCITT Recommendation G.752 (1980), *Characteristics of digital multiplex equipments based on a second order bit rate of 6312 kbit/s and using positive justification.*
- [7] ITU-T Recommendation G.803 (1997), *Architectures of transport networks based on the Synchronous Digital Hierarchy (SDH).*
- [8] ITU-T Recommendation G.811 (1997), *Timing characteristics of primary reference clocks.*
- [9] ITU-T Recommendation M.60 (1993), *Maintenance terminology and definitions.*
- [10] CCITT Recommendation M.1012 (1988), *Circuit control station for leased and special circuits.*
- [11] CCITT Recommendation M.1013 (1988), *Sub-control station for leased and special circuits.*