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OF ITU

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**SPECIFICATIONS OF SIGNALLING
SYSTEM No. 7**

**INTRODUCTION TO CCITT
SIGNALLING SYSTEM No. 7**

ITU-T Recommendation Q.700

(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 Q.700 was revised by the ITU-T Study Group XI (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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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 CCITT SIGNALLING SYSTEM No. 7

(Melbourne 1988; modified at Helsinki 1993)

1 General

This Recommendation provides an overview of the Signalling System by describing the various functional elements of CCITT Signalling System No. 7 (SS No. 7) and the relationship between these functional elements. This Recommendation provides a general description of functions and capabilities of the Message Transfer Part (MTP), Signalling Connection Control Part (SCCP), Telephone User Part, ISDN User Part (ISUP), Transaction Capabilities (TC), and the Operations, Maintenance and Administration Part (OMAP) which are covered elsewhere in the Q.7xx-Series Recommendations. (This includes Recommendations Q.700 to Q.787.) However, in the case of contradiction between a particular specification and Recommendation Q.700, the particular specification shall apply.

The SS No. 7 ISDN supplementary services are described in the Q.73x-Series Recommendations.

In addition to these functions in the SS No. 7 signalling system, the Q.7xx Series Recommendations describes the SS No. 7 network structure, and also specifies the tests and measurements applicable to SS No. 7.

This Recommendation also contains information about other aspects such as SS No. 7 architecture, flow control and general compatibility rule which are not specified in separate Recommendations, and are applicable to the overall scope of SS No. 7. Recommendation Q.1400 also contains information about architecture and compatibility.

The remainder of this Recommendation describes:

- clause 2: Signalling network concepts components and modes;
- clause 3: The functional blocks within SS No. 7 and the services provided by them;
- clause 4: SS No. 7 protocol layering and its relationship to OSI modelling;
- clause 5: Node, application entity and user part addressing;
- clause 6: Operations, administration and maintenance aspects of SS No. 7;
- clause 7: Performance aspects of the functional blocks within SS No. 7;
- clause 8: Flow control for both the signalling network and within nodes;
- clause 9: Rules for evolving SS No. 7 protocols while preserving compatibility with earlier versions;
- clause 10: A cross-reference to a glossary of terms.

1.1 Objectives and fields of application

The overall objective of SS No. 7 is to provide an internationally standardized general purpose common channel signalling (CCS) system:

- optimized for operation in digital telecommunications networks in conjunction with stored program controlled exchanges;
- that can meet present and future requirements of information transfer for inter-processor transactions within telecommunications networks for call control, remote control, and management and maintenance signalling;
- that provides a reliable means for transfer of information in correct sequence and without loss or duplication.

The signalling system meets requirements of call control signalling for telecommunication services such as the telephone, ISDN and circuit switched data transmission services. It can also be used as a reliable transport system for other types of information transfer between exchanges and specialized centres in telecommunications networks (e.g. for

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