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GENERAL ASPECTS OF DIGITAL TRANSMISSION SYSTEMS

PROTOCOL SUITES FOR Q-INTERFACES FOR MANAGEMENT OF TRANSMISSION SYSTEMS

ITU-T Recommendation G.773

(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 G.773 was revised by the ITU-T Study Group XV (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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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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Recommendation G.773**PROTOCOL SUITES FOR Q-INTERFACES FOR MANAGEMENT
OF TRANSMISSION SYSTEMS***(Geneva, 1990; revised at Helsinki, 1993)***1 Introduction****1.1 Scope**

This Recommendation defines the characteristics of protocol suites for Q-interfaces to connect transmission systems/equipments, as defined in Recommendation M.3010 [1]. Protocol suites for Q-interfaces of other systems/equipments will be specified in other Recommendations. The interfaces will support bidirectional data transfer for the management of telecommunications systems.

This Recommendation defines:

- the layer services;
- the layer protocols;
- the application service elements and protocols;
- the conformance requirements to be met by an implementation of these interfaces.

This Recommendation does not define:

- the structure or meaning of the management information that is transmitted by means of the protocol suites;
- the manner in which management is accomplished as a result of the application protocol exchanges;
- the interactions which result in the use of the application layer protocols.

1.2 Abbreviations and symbols**1.2.1 Abbreviations**

For the purposes of this Recommendation, the following abbreviations apply:

AARE	A-associate response
AARQ	A-associate request
ACSE	Association control service element
AFI	Authority and format identifier
ASE	Application service element
ASN.1	Abstract Syntax Notation One
CD	Collision detection
CLNS	Connectionless-mode network service
CMIP	Common management information protocol
CMIS	Common management information service
CMISE	Common management information service element
Conf	Confirm
CONS	Connection oriented-mode network service
CSMA	Carrier sense multiple access
DCE	Data circuit terminating equipment
DIS	Draft international standard

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DLC	Data link connection
DLS	Data link service
DSP	Domain specific part
DTE	Data terminal equipment
EOC	Embedded operations channel
HDLC	High-level data link control
Ind	Indication
ISO	International Organization for Standardization
LLC	Logical link control
LME	Layer management entity
MAC	Media access control
NDM	Normal disconnected mode
NE	Network element
NRM	Normal response mode
NRZ	Non return to zero
NRZI	Non return to zero inverted
NS	Network service
NSAP	Network service access point
OSI	Open Systems Interconnection
PhC	Physical connection
Ph	Physical
PhS	Physical service
PICS	Protocol implementation conformance statement
PLS	Physical layer service
QOS	Quality of Service
Req	Request
Res	Response
ROSE	Remote operations service element
SDH	Synchronous digital hierarchy
SM-ASE	System management-application service element
SP	Session protocol
TMN	Telecommunications management network
UNC	Unbalanced operation normal response mode class

1.2.2 Symbols and abbreviations used in tables

M Mandatory

– The parameter is not present in the interaction described by the service or primitive concerned

(=) The value of the parameter is equal to the value of the parameter in the column to the left

2 Protocol suites overview

The structures of the protocol suites with the present layers are shown in Figure 1. The defined communication services and protocols are in accordance with the Open System Interconnection (OSI) reference model [2].

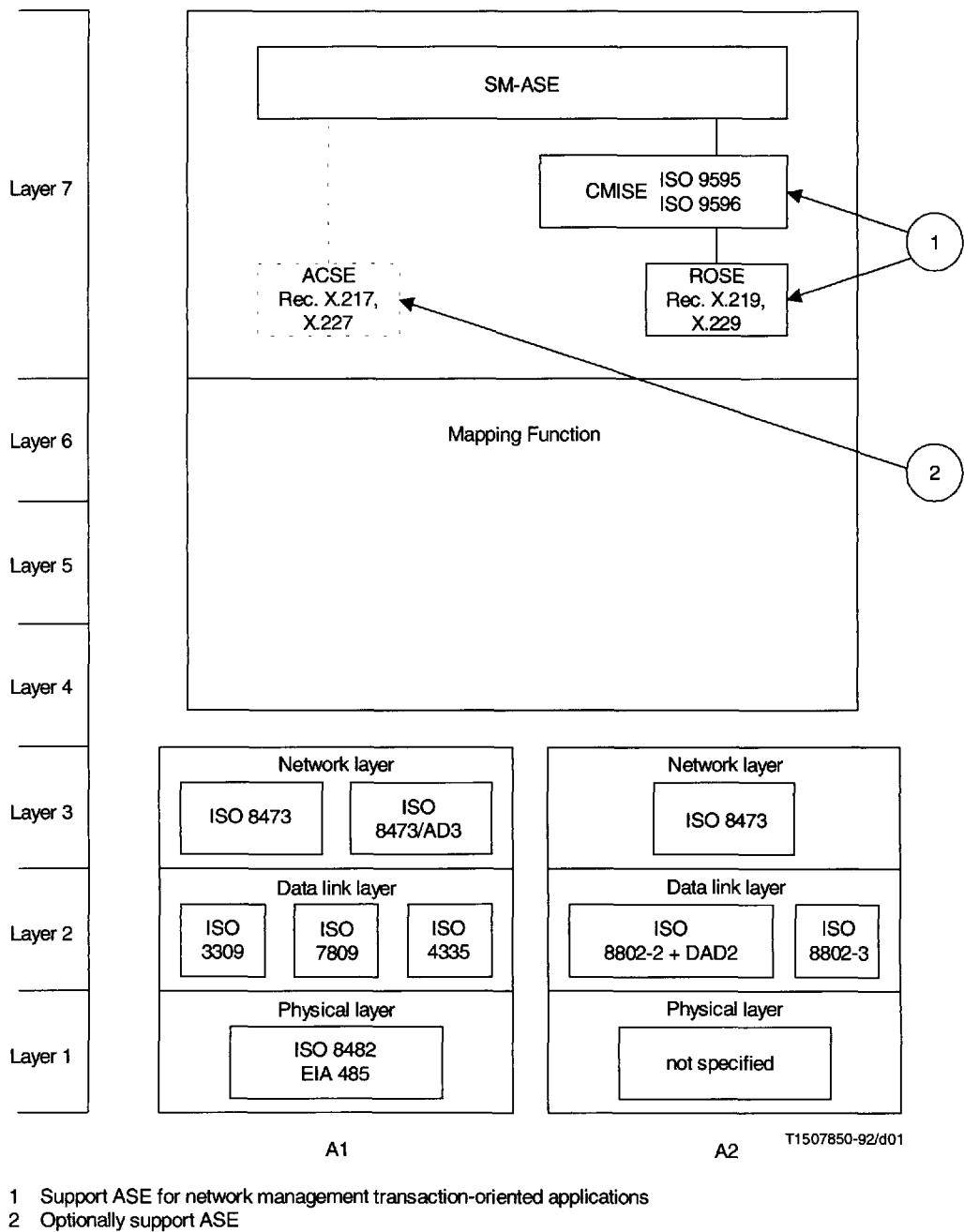


FIGURE 1/G.773
Overview of protocol suites short stacks

The protocols for the different layers are based on CCITT Recommendations and/or ISO Standards.