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

Telecommunications management network

TMN F interface requirements

ITU-T Recommendation M.3300

(Previously CCITT Recommendation)

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

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ITU-T RECOMMENDATION M.3300

TMN F INTERFACE REQUIREMENTS

Summary

This Recommendation provides requirements for the TMN F interface. The F interface is between a Workstation and other TMN physical blocks: an Operations Systems (OS), Mediation Device (MD), or Network Element (NE).

Source

ITU-T Recommendation M.3300 was revised by ITU-T Study Group 4 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 26th of June 1998.

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.

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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.

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Recommendation M.3300

TMN F INTERFACE REQUIREMENTS

(revised in 1998)

1 Scope

This Recommendation defines the functional requirements for the TMN interface to the Workstation. The F interface requirements imply certain capabilities in Workstations. Note that a Workstation may have capabilities in addition to those that are relevant to the F interface.

The functionality specified at the interface implies there are applications that need that functionality. However, any particular application may not use all of the requirements for this interface.

2 References

The following ITU-T Recommendations and other references 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 and other references 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 and other reference listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- ITU-T Recommendation M.3010 (1996), *Principles for a telecommunications management network*.

3 Definitions

This Recommendation defines the following terms:

- 3.1 **user, TMN user:** Recommendation M.3020 defines a TMN user as "that which requires the TMN management services in support of its activities. It may be a human user applying for the use of services via some human-machine communication or it may be some computer-based organizational system requiring the capabilities of the TMN." Within this Recommendation, the terms "TMN user" and "user" refer to a *human user at a Workstation* accessing TMN functionality.
- 3.2 **user interface:** Human-computer interface or human-machine interface.
- 3.3 **F interface:** An interface applied at f reference points. The F interface is between a Workstation and other TMN physical blocks: an Operations System (OS), Mediation Device (MD), or Network Element (NE).
- 3.4 **Workstation:** A physical block that performs the workstation function.
- 3.5 **workstation function:** A function block that interprets TMN information for the user, and vice versa.
- 3.6 **f reference point:** A reference point that is located between the workstation function block and the operations system function block or mediation function block.
- 3.7 **g reference point:** A reference point located outside the TMN, between the human user and the workstation function block.
- 3.8 **user interface support function:** A functional component that translates information held in TMN information models to a displayable format for the human-machine interface and that translates user input to TMN information models.
- 3.9 **workstation support function:** A functional component that provides support for the workstation function block, including data access and manipulation, invocation and confirmation of actions, transmittal of notifications, and that hides the existence of other function blocks from the user.



Documents

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3.10 display client: A "managing" Workstation that makes requests to a display server (another Workstation) to display information in a specific layout and format on the display server's screen.

3.11 display server: A Workstation that fulfils requests made by a display client (another Workstation) to display information in a specific layout and format on its screen.

3.12 F interface instance: An association between a user and an OS that is characterized uniquely by the combination of the instance of communication, the endpoints (specific WS and OS), and the portion of the agent's MIB made visible.

3.13 managed objects: A management view of a resource that may be managed through the use of management protocol(s).

3.14 management information base: The visible management information exposed on the F interface by an agent (an OS or WS currently assuming an agent role).

3.15 Workstation objects: Objects in the Workstation that have F interface interactions.

3.16 user-management objects: Workstation objects that represent managed objects in the Operations System.

3.17 Workstation support objects (in this Recommendation, also referred to as **support objects**): Workstation objects that are not user-management objects.

3.18 OS: As defined in Recommendation M.3010, with the following addition: Since WSF may communicate with OSF or MF in an OS, MD, or NE, the term "OS" is used for conciseness to represent "OS, MD, or NE" throughout this Recommendation.

3.19 Definitions imported from other Recommendations

This Recommendation uses terms defined in Recommendation M.3010:

- Telecommunications Management Network (TMN);
- TMN physical block;
- TMN function block;
- TMN reference point;
- TMN functional component;
- TMN management service;
- TMN managed area;
- TMN management function;
- operations system;
- mediation device;
- network element;
- operations system function;
- mediation function;
- security function;
- directory access function;
- directory system function;
- message communication function;
- information conversion function.



This Recommendation uses the following terms defined in Recommendations X.701 and X.703:

- manager;
- agent;
- shared management knowledge.

This Recommendation uses the following term defined in Recommendation X.200:

- association.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations:

DAF	Directory Access Function
DSF	Directory System Function
EFD	Event Forwarding Discriminator
ICF	Information Conversion Function
IT	Information Technology
MCF	Message Communication Function
MD	Mediation Device
MF	Mediation Function
MIB	Management Information Base
MO	Managed Object
NE	Network Element
NEF	Network Element Function
OS	Operations System
OSF	Operations System Function
OSF-MAF (A/M)	OSF-Management Application Function (in agent or manager role)
OSI	Open Systems Interconnection
SF	Security Function
SMK	Shared Management Knowledge
TMN	Telecommunications Management Network
UI	User Interface
UISF	User Interface Support Function
UMO	User-Management Object
WO	Workstation Object
WS	Workstation
WSF	Workstation Function
WSSF	Workstation Support Function

