INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

M.1400

Amendment 1
(06/98)

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

Designations and information exchange

Designations for international networks

Amendment 1

ITU-T Recommendation M.1400 – Amendment 1

(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.1400

DESIGNATIONS FOR INTERNATIONAL NETWORKS

AMENDMENT 1

Source

Amendment 1 to ITU-T Recommendation M.1400, was prepared 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.

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.

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Recommendation M.1400

DESIGNATIONS FOR INTERNATIONAL NETWORKS

AMENDMENT 1

(Geneva, 1998)

1) New subclause 0.5

Insert the following text:

0.5 Carrier Information

Due to liberalization of telecommunications and increased competition in the telecommunications industry, there is a mandatory requirement that telecommunication operators or carriers that interoperate be identified. A centralized list of International Carrier Codes (ICCs) has been created, with TSB (ITU-T Secretariat) as the repository [22]. All international carriers are expected to register with TSB for an ICC.

This list may be used to identify the international carriers while completing Layer 2 records, related information, as explained in 2.3, 7.3 and 15.3. In addition, abbreviated forms of ICCs are designated within the suffix, as mentioned in 0.1.

Request for assignment should be directed to:

Director of TSB
International Telecommunication Union
Tel: +41 22-730-58-82
Fax: +41 22-730-58-53

This ICC list will be updated by numbered series of amendments published in the ITU Operational Bulletin. Furthermore, this list is also available on the ITUDOC system (via ITU TIES), and can be consulted by subscribers by remote access. The information which will be maintained will be found in the "ITU Telecommunication Standardization Sector" part of the ITU document database, under the heading "Lists annexed to the Operational Bulletin".

2) Subclause 2.3

Replace with the following text:

2.3 Names of Administrations or carriers [item 3)]

This item records the names of the Administrations or carriers which operate the circuit.

The applicable carrier codes can be selected from the ITU-T "International Carrier Code List" as described in 0.5.

Format:

3 YYYYYY, ZZZZZZ; (maximum 6 characters for each)

Specification:

YYYYYY: code for company operating in town A

ZZZZZZ: code for company operating in town B

Example:

For the circuit London/KB–Tokyo/SJK Z101 operated by BTI and KDD:

3. BT, KDD;

3) Subclause 7.3

Replace with the following text:

7.3 Names of Administrations, carriers or broadcasting companies [item 3)]

This item records the names of the carriers, etc., which operate the group/group link. The applicable carrier codes can be selected from the ITU-T "International Carrier Code List" as described in 0.5.

Format:

3. XXXXXX, YYYYYY; or XXXXXX; (maximum 6 characters for each)

Specification:

XXXXXX: name of company in town A

YYYYYY: name of company in town B

In the case of an unidirectional multiple destination, only XXXXX applies.

Example 1:

For the supergroup Amsterdam–London 6002:

3. TCOMNL, BT;

Example 2:

For the multiple destination group Hong Kong–(MU) 1201:

3. HKGTEL;

4) Subclause 15.3

Replace with the following text:

15.3 Names of Administration, carriers or broadcasting companies [item 3)]

This item records the names of the carriers, etc., which operate the block, path, etc. The applicable carrier codes can be selected from the ITU-T "International Carrier Code List" as described in 0.5.

Format:

3 XXXXXX, YYYYYY; (maximum 6 characters for each) or 3. XXXXXX;

Specification:

XXXXXX: name of company in town A

YYYYYY: name of company in town B

In the case of a multiple destination unidirectional block, only XXXXXX applies.

Example:

For a digital block Frankfurt–London 30N1 operated by BT (British Telecom) and Deutsche Telekom:

3. DTAG, BT;

5) Subclause 15.7

Replace with the following text, adding a new subclause 15.7.4:

15.7 Association [item 7)]

This item identifies whether there are associated blocks, paths, data transmission systems, digital blocks created between DCMES, Virtual Containers and SDH multiplex sections, and if so, of what type.

Format:

7. Association code: designation(s) of the associated block(s), path(s), etc.;

15.7.1 Information on reserve blocks, paths, data transmission systems created digital blocks between DCMEs, Virtual Containers and multiplex sections

Specification:

If the block *has* a reserve block, the association code is: S followed by the function code and the serial number of the principal block.

If the block *is* a reserve block, the association code is: function code followed by S and the serial number of the reserve block.

The same applies for digital paths, data transmission systems, etc.

Example:

If the path Hongkong–Singapore 30N801 is the restoration path for the normal block Hongkong–Singapore 30N3, the Related information for the normal block under Association must show:

7. S30N3: Hongkong–Singapore 30N801;

15.7.2 Information on diverse routing

Specification:

If a block is required to be routed on a different route than other blocks, the association code is DVR followed by the designation of the other blocks.

The same applies for digital paths, data transmission systems, etc.

Example:

If a block Amsterdam–Paris 30N7 is required to be routed on a different route than the blocks Amsterdam–Bruxelles 30N12 and Bruxelles–Paris 30N2, the related information for the block Amsterdam–Paris 30N7 under Association must show:

7. DVR: Amsterdam–Bruxelles 30N12,

   Bruxelles–Paris 30N2;

NOTE – The codes listed in 15.7.1 and 15.7.2 may both appear under Association.

15.7.3 Information on consecutive routing

Specification:

If the time slots in a block carry traffic that is consecutively routed on international single bearers, the block and the single bearers get an Association code, namely:

PLR = part of a longer route.

Example:

If five single bearers (see the example in 11.2) are connected in London to five time slots in the international 2 Mbit/s digital block Amsterdam/PTT–London/XYZ 30N1 the Association is as follows:

Amsterdam/PTT–London/XYZ 30N1

7. PLR: London/XYZ–New York/ABC 64K1
London/XYZ–New York/ABC 64K2
London/XYZ–New York/ABC 64K3
London/XYZ–New York/ABC 64K4
London/XYZ–New York/ABC 64K5

Similar for each of the single bearers e.g. for London/XYZ–New York/ABC 64K1:

7. PLR: London/XYZ–New York/ABC 30N1;

15.7.4 Information on maintaining the sequential order of digital paths (concatenation)

Specification:

If a couple of digital paths together support a service, it may be required to maintain the sequential order of the paths when multiplexed into a higher order block or container. In that case the designations of the paths get an Association code on concatenation, namely TSG = time slot sequential order must be guaranteed on an end-to-end basis; the format then is:

7. TSG followed by the function code and the sequential numbers of all concatenated digital paths including those of the path under consideration.

Example:

Three international 2 Mbit/s digital paths together support a video service, namely:

Lisboa/X1Y–Milano/TI1 30N21, Lisboa/X1Y–Milano/TI1 30N22, Lisboa/X1Y–Milano/TI1 30N23;

They must stay concatenated when they are being multiplexed into a virtual container and therefore each of their designations gets the Association code TSG followed by function code and the sequential numbers of all three concatenated 2 Mbit/s digital paths:

Lisboa/X1Y–Milano/TI1 30N22 has under Related Information item 7:

7. TSG: 30N21-23;

6) Clause 16

Replace with the following text:

16 Designation of connections for the Asynchronous Transport Mode (ATM)

16.1 General

This subclause deals with semi-permanent or permanent connections for the ATM as defined in Recommendations I.121, I.150, I.211, I.230, I.231, I.232, I.310, I.311, I.326, I.365, I.432.

ATM transport network can be supported by PDH and SDH through a number of transmission systems. ATM transport network nodes are connected by transport links (physical layer) and Virtual Path (VP). VP's transmission capacity can be assigned to one or more Virtual Channels (VC).

The format of designation of ATM transport links, VP and VC, is shown in Table 11:

Table 11/M.1400

Format of designation	Town A	/	Suffix for transmission station (optional)	–	Town B	/	Suffix for transmission station (optional)		Function code	Serial number
Signs	Characters	Slash	Letters/ digits	Hyphen	Characters	Slash	Letters/ digits	Space	Letters/ digits	Digits
Number of characters	≤ 12	1	≤ 3	1	≤ 12	1	≤ 3	1	2 to 6	1 to 4
									↑ No space	

16.2 Transport links

Transport links are based upon either PDH digital paths or SDH virtual containers. So the links are not identical to the paths or containers, but do use them. The paths therefore act as a server and ATM transport link acts as the client. From a network model point of view, the PDH digital path and the SDH virtual container belong to the server layer and the ATM transport link to the client layer. This relation will be reflected in the routing of ATM transport links: they are being routed either on a PDH digital path or a virtual container.

The elements of the format are:

a) *Traffic relation*

Town A and town B, possibly with a transmission station suffix, represent the two terminal stations of the ATM transport link. The names are arranged in alphabetical order. For the spelling, see 1.1. If the town name exceeds the maximum length of 12 characters, the responsible Administration should supply a suitable abbreviation which must be unique (see 0.1).

The suffix for transmission station (maximum 3 characters), although optional, is recommended to further identify the terminal points of ATM transport links when the terminal points are located in different buildings. The necessity for a suffix should be decided by the Administration operating the ATM connection in the town concerned and its form should be designed by both the Administrations involved. The suffix is mandatory when there is more than one carrier operating in the same town.

b) *Function code*

This code is the following:

A34M for 34 Mbit/s ATM transport link;

A45M for 45 Mbit/s ATM transport link;

A155M for 155 Mbit/s ATM transport link;

A622M for 622 Mbit/s ATM transport link;

A2500M for 2.5 Gbit/s ATM transport link;

A10G for 10 Gbit/s ATM transport link;

A40G for 40 Gbit/s ATM transport link.

c) *Serial number*

This is a 1- to 4-digit number counting the number of transport links with the same traffic relation and the same function code.

Example:

The first transport link at the speed of 34 Mbit/s between Lugano and Milan will be designated:

Lugano/SUI–Milano/M*I A34M1

16.3 Virtual path

The elements of the format are as follows:

a) *Traffic relation*

Town A and town B, possibly with a transmission station, represent the two terminal stations of the ATM virtual path. The names are arranged in alphabetical order. For the spelling, see 1.1. If the town name exceeds the maximum length of 12 characters, the responsible Administration should supply a suitable abbreviation which must be unique (see 0.1).

The suffix for transmission station (maximum 3 characters) although optional, is recommended to further identify the terminal points of ATM virtual paths when the terminal points are located in different buildings. The necessity for a suffix should be decided by the Administration operating the ATM connection in the town concerned and its form should be designed by both the Administrations involved. The suffix is mandatory when there is more than one carrier operating in the same town.

NOTE – The information about the virtual path being bidirectional or unidirectional and, in this case, the information about its origin and destination points, are crucial for maintenance, and will be addressed in the related information, which is open for further study.

b) *Function code*

This code is VPA.

c) *Serial number*

This is a 1- to 4-digit number counting the number of virtual paths with the same traffic relation and the same function code.

Example:

The first ATM virtual path from Leeds to Koeln will be designated:

Leeds/FGY-Koeln/DG VPA1

16.4 Virtual channels

The elements of the format are as follows:

a) *Traffic relation*

Town A and town B, possibly with a transmission station or international exchange suffix, represent the two terminal stations of the ATM virtual channel. The names are arranged in alphabetical order. For the spelling, see 1.1. If the town name exceeds the maximum length of 12 characters, the responsible Administration should supply a suitable abbreviation which must be unique (see 0.1).

The suffix for transmission station (maximum 3 characters) although optional, is recommended to further identify the terminal points of ATM virtual channels when the terminal points are located in different buildings. The necessity for a suffix should be decided by the Administration operating the ATM connection in the town concerned and its form should be designed by both the Administrations involved. The suffix is mandatory when there is more than one carrier operating in the same town.

NOTE – The information about the virtual channel being bidirectional or unidirectional and, in this case, the information about its origin and destination points are crucial for maintenance, and will be addressed in the related information, which is open for further study.

b) *Function code*

This code is VCA.

c) *Serial number*

This is a 1- to 4-digit number counting the number of virtual channels with the same traffic relation and the same function code.

NOTE – The statement in revised 16.2, "The suffix is mandatory when there is more than one carrier operating in the same town" applies in principal to several other subclauses of Recommendation M.1400. These subclauses will be updated in the Technical Corrigendum to be consistent with 16.2.

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