



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

**M.1400
Implementers'
Guide**

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

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SERIES M: Telecommunication management, including
TMN and network maintenance

**Implementers' Guide for ITU-T Rec. M.1400
Series**

Defects and resolutions, version 3

Abstract

This document is a compilation of reported defects in the ITU-T M.1400 series of Recommendations. It is intended to be an additional authoritative source of information for Implementers to read in conjunction with the Recommendations themselves. Further, the Guide includes defect resolutions that will be corrected in the next editions of the relevant Recommendations.

Summary

This document is an Implementers' Guide for ITU-T Recommendation of M.1400 Series.

Source

This document was agreed by ITU-T Study Group 4 on 14 February 2007.

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Preface

The purpose of this Guide is to help the implementers of ITU-T Recommendation M.1400, *Designations for interconnections among operators' networks* and ITU-T Recommendation M.1401, *Formalisation of interconnection designations among operators' networks*. This Guide is not part of those Recommendations, but may be used in their ongoing maintenance.

Items marked with an asterisk (*) were added to the Guide or modified for this Version.

Every change to the Recommendations are identified with bullets having reference numbers of the form Yx where Y is a letter which corresponds to one of the ITU-T Recommendations and x is a number which identifies the particular change in the context of that Recommendation.

At the end of each bullet a defect report number (DR) is included if appropriate. This defect report number is used in Appendix A, which is a register of defect reports raised and their current status. Note that a single bullet may relate to more than one defect report, or a single defect report may result in more than one bullet being generated.

Wide distribution of this document is expected and encouraged. The latest version of this Guide will be available on the Word Wide Web server of the ITU (<http://www.itu.int>) below the ITU-T SG 4 entry.

This Guide is published in the spirit of international communication and co-operation. However the author assumes no responsibility for the accuracy of the information it contains or for the consequences arising from its use.

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1 Introduction

1.1 Background

This Guide concerns ITU-T Recommendations M.1400, *Designations for interconnection among operators' networks* and M.1401, *Formalisation of interconnections designations among operators' networks*.

This Guide is informal in nature and is not an ITU-T Recommendation. The information it contains will serve as an information source for the ITU-T SG 4, which is responsible for maintaining the ITU-T Recommendations M.1400 and M.1401, and other users both within and outside of the ITU-T. The changes are expected to be included in future versions of these Recommendations.

1.2 Scope of the Guide

This guide resolves defects in (only) the following categories:

- editorial errors;
- technical errors, such as omissions or inconsistencies;
- ambiguities.

In addition, the Guide may include explanatory text found necessary as a result of interpretation difficulties apparent from the defect reports.

Note: This Guide will not address proposed additions, deletions or modifications to the Recommendations that are not strictly related to implementation difficulties in the above categories.

1.3 Contacts and Distribution of the Guide

This Guide will be made available at ITU-T SG4 meetings as well as meetings of ITU-T WP1/4. In addition, copies of this Guide, can in general, also be made available from one's national ITU-T representative. Copies may also be obtained from other agencies.

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1.4 History log

Item	Location	Reason
1.0	Geneva, May 2004	First version of the Guide
2.0	Geneva, Sep 2005	Second version of the Guide
3.0	Geneva, Feb 2007	Third version of the Guide

2 Defect Report and Resolution Procedures

2.1 Submission of defects

Any Implementer of Recommendations M.1400 and M.1401 is invited to submit a defect report using the form in Appendix B of the Guide. The defect should be submitted to the ITU-T SG4 Secretariat and copied to the Rec. M.1400 or Rec. M.1401 Editor. Each form should cover a single defect. It is important that the form is completed accurately, especially the sections that relate to the base material against which the defect report is being raised.

2.2 Resolution of Defects

A standing agenda topic for meetings of the Sub-working Party on Question 2/4 will be the resolution of defects in Recommendations M.1400 and M.1401. Following agreement on a resolution, the proposed resolution may require approval of ITU-T WP1/4 and ITU-T SG4.

This Guide will contain resolutions as they are agreed to by the Sub-working Party on Question 2/4. The status of each will be reflected in Appendix A of the Guide and any modifications required to the resolutions themselves prior to final approval, will be reflected in Section 3 of the Guide.

Please note that individual responses cannot be given to an individual submitting defect reports, and that the defect reporting procedure is not intended to be a consulting service.

2.3 Defect report register

New defect reports will be included in the report of the Sub-working Party on Question 2/4.

3 Implementation Guidance

Remember that this Guide is intended to be an authoritative source of information for Implementers of Recommendations M.1400 and M.1401; however it is not itself an ITU-T Recommendation.

Items marked with an asterisk (*) were added to the Guide or modified for this version of the Guide.

Bullets have reference numbers of the form Yx where Y is a letter that corresponds to one of the ITU-T Recommendations, and x is a number that identifies the bullet in the context of that Recommendation.

At the end of each bullet title a defect report number (DR) is included if appropriate. This defect report number is used in Appendix A, which is a register of defect reports raised and their current status. Note that a single bullet may relate to more than one defect report, or a single defect report may result in more than one bullet being generated. Text contained in this clause shall only be considered final when the associated changes are part of a revised Recommendation.

3.1 Changes to Pre-published Rec. M.1400 (01/04)

See

*Rec. M.1400 (07/2006)

for published corrections.

A1 DR-M1400-1 Reference

In Clause 2 References,

Replace

[2] ISO 3166:1993, *Codes for the representation of names of countries*

with

[2] ISO 3166-1 (1997), *Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes*

3.2 Changes to Pre-published Rec. M.1401 (05/05)

See

*Rec. M.1401 (07/2006)

for published corrections.

B1 DR-M1401-1 Reference

In Clause 2 Normative references

Add

[6] ISO 3166-1 (1997), *Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes*

B1 DR-M1401-2 Town

In Clause 6 Application schema, Definition of Town object class reference to Site object class
Replace

“A Country’s subordinate Site is a ...”

with

“A Town’s subordinate Site is a”

B1 DR-M1401-3 Conventions

Replace the text in Clause 5 Conventions with

Figure 1 shows boxes containing object class labels to indicate object classes. Lines supported with a reversed arrowhead indicate subordinate object classes. Lines with two-way arrows indicate references between object classes. A dashed one-way arrow with an S at the arrowhead indicates a schema reference and is here used for stating recursion.

The text that follows Figure 1 includes a label and explanation for each class in the schema. A class can be an object class, an attribute class, or a reference class. The level of each class is depicted in the text by indentations (5 mm) of the class label, supported with dashes, where the number of indentations and dashes indicates the level of a given class within the schema. Therefore, each class label has a given indentation based on the Figure 1 schema graph.

Labels of data items that are subordinate to or referenced from a given object class are presented in the following sequence: 1) alphabetized object class attributes, 2) alphabetized object class references, and 3) alphabetized object classes that are contained within the given object class at the next lower level .

Textual definitions and explanations of object classes, attributes and references are provided in paragraphs that are adjusted 5 mm further to the right of their respective labels.

Object class labels are underlined; attribute group and attribute labels are not underlined. Object class references are written in blue, italics and underlined.

The formalism used in this document is introduced in Appendix III of Recommendation M.1401.

Data attributes shall consist of sequences of characters, each character being either alphabetic (A-Z) or numeric (0-9). Additional requirements for symbols are explicitly stated in format requirements for specific attributes. It is recommended that alphabetic characters be represented with upper case letters unless stated otherwise.

B1 DR-M1401-4 Sorting

In clause 6 Application schema,

Sort object class attributes, references and subordinate object classes in the following sequence.

Address

- [Site](#)

Association

- Kind

- [*Superior trail*](#)

- [*Trail*](#)

Country

- Name
- Code
- Operator
 - • ICC
 - • [*Controlled site*](#)
 - • [*Controlled trail*](#)
 - • Cross-coupling site
 - • • Identifier
 - • • • Town
 - • • • Site detail
 - • • Local identifier
 - • • [*Address*](#)
 - • • [*A-end site relationship*](#)
 - • • [*B-end site relationship*](#)
 - • • [*Current operator*](#)
 - • • [*Termination*](#)
 - • • [*Town*](#)
 - • • Equipment
 - • • • Identifier
 - • • • [*Exchange*](#)
 - • • • [*Location*](#)
 - • • • Component
 - • • • • Identifier
 - • • • • [*Location*](#)
 - • • • • Port
 - • • • • • Identifier
 - • • • • • [*Position*](#)
 - • • • • • [*Trail section*](#)
 - • • • • Exchange
 - • • • • No
 - • • • • [*Equipment*](#)
 - • • • • Location
 - • • • • Identifier

- • • • [Component](#)
- • • • [Equipment](#)
- • • • [Location](#)
- • • • • *S<> ' Location ' Location*
- • • • [Position](#)
- • • • • Identifier
- • • • • [Physical link connection](#)
- • • • • [Port](#)
- • • • • [Position](#)
- • • • • [Trail](#)
- • • • • [Trail multiplex channel](#)
- • • • • [Trail section](#)
- • [Multipoint trail](#)
- • • Identifier
- • • [Trail](#)
- [Town](#)
- • Name
- • [Site](#)

Site relationship

- Identifier
- • A-end
- • • Country Code
- • • ICC
- • • Site
- • B-end
- • • Country Code
- • • ICC
- • • Site
- [A-end site](#)
- [B-end site](#)
- [Physical link](#)
- • Identifier
- • [Physical link connection](#)
- • • Identifier
- • • [Position](#)
- • • [Trail section](#)

- Trail
- • Identifier
- • Bandwidth
- • • Maximum
- • • • Size
- • • • Unit
- • • Actual
- • • • Size
- • • • Unit
- • Signalling
- • Urgency
- • • Priority
- • • Limit
- • • Deadline
- • • • Date
- • • • • Day
- • • • • Month
- • • • • Year
- • • • Time
- • • • • Hour
- • [Association](#)
- • [Controller](#)
- • [Multipoint trail](#)
- • [Position](#)
- • [Routing trail section](#)
- • [Subordinate association](#)
- • Termination
- • • Direction
- • • [Cross-coupling site](#)
- • Trail multiplex channel
- • • Number
- • • [Position](#)
- • • [Trail section](#)
- • Trail section
- • • Identifier

- • • [Physical link connection](#)
- • • [Port](#)
- • • [Position](#)
- • • [Trail](#)
- • • [Trail multiplex channel](#)

B1 DR-M1401-5 Amendment 1

In Clause 6 Application schema,

Replace

- ▪ ▪ Local identifier

An identifier of the Cross-coupling site that is unique within an Operator, having up to 18 alphabetic and/or numeric characters. A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in M.1400 Amendment 1.

with

- ▪ ▪ Local identifier

An identifier of the Cross-coupling site that is unique within an Operator, having up to 18 alphabetic and/or numeric characters. A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in M.1400.

B1 DR-M1401-6 Local identifier

In Clause 6 Application schema,

Provide the following addition to Rec. M.1401:

Site relationship

- Local identifier

The Local identifier of a Site relationship is an attribute group that uniquely identifies the Site relationship.

A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in Rec. M.1400.

Aliases of Cross-coupling site Identifiers are not permitted for communication between Operators of different Countries. However, Operators may exchange Local identifiers that are local to a specific Operator, country or region.

- ▪ A-end

The A-end of the Local identifier uniquely identifies the Site relationship's subordinate A-end site, using its Local identifier.

- ▪ B-end

The B-end of the Local identifier uniquely identifies the Site relationship's subordinate B-end site, using its Local identifier.

3.3 Changes to Rec. M.1401 (07/2006)

See

Rec. M.1401 ()

for published corrections.

*B2 DR-M1401-7 Corporation

In Clause 6 Application schema, add a new root Corporation object class to Figure 1/M.1401, superior to the Country object class. Also provide text to define the Corporation object class.

*B2 DR-M1401-8 Geographical area Name

Replace

Name of the Geographical area as spelled by the authorities in that Country, i.e., in a national language of that Country. Note that different spellings dependent on the user are not permissible. Geographical area Name has up to 12 characters. Upper- and lower-case letters are permitted. Symbols that may be included in Geographical area Name are hyphen (-), underscore (_) and space (.). In the case the spelling given by the authorities exceeds 12 characters is not unique with 12 characters only, the Administration in that Country is responsible for assigning a unique identifier.

with

Name of the Geographical area as spelled by the authorities in that Country, i.e., in a national language of that Country. Note that different spellings dependent on the user are not permissible. Geographical area Name has up to 12 characters. Upper- and lower-case letters are permitted. Symbols that may be included in Geographical area Name are hyphen (-), underscore (_) and space (.). In case the spelling given by the authorities exceeds 12 characters, or is not unique with 12 characters only, the Administration in that Country is responsible for assigning a unique identifier.

Appendix A Defect Report Register

The defects reported to date are listed below. The status of each is indicated according to the classification outlined below:

O Open

- The defect has been submitted, a solution may have been proposed, but the Sub-working Party on Question 2/4 has not yet come to an agreement.

A/U Agreed/Unanimous

- Proposed solution agreed by everyone in the Sub-working Party on Question 2/4
- Pending approval by Study Group 4

A/C Agreed/Consensus

- Consensus solution agreed by the Sub-working Party on Question 2/4 and documented in this version of the Implementers' Guide.
- Pending approval by Study Group 4

C Complete

- Defect resolution approval by full Study Group
- Final resolution reflected in this version of Implementers' Guide

P Published

- Change included in published version

R Rejected

- As a defect (may be misinterpretation, request for extension or have already been corrected in subsequent version of text)

W Withdrawn

- Defect report withdrawn by source.

The severity of each is indicated according to the classification outlined below:

m Minor

The following defects are classified as minor:

- Out-of-date reference
- Syntax errors in labels of object classes, attributes, object references, etc. in M.1401
- Misalignment in labels of object classes, attributes, and object references and associated text in M.1401
- Non-conformance to the sequence convention of text describing M.1401
- Clarifications of ambiguities in the text if supported by the formal definitions
- Typographical errors.

M Major

- All other defects are classified as major.

Pre-published ITU-T Rec. M.1400 (01/2004)

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
P	m	DR-M1400-1 Reference	Telcordia Technologies		M.1400/§2	Change [2] ISO 3166:1993, <i>Codes for the representation of names of countries</i> To [2] ISO 3166-1 (1997), <i>Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes</i>

Pre-published Rec. M.1401 (05/2005)

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
P	m	DR-M1401-1 Reference	Telenor		M.1401/§2	Add [6] ISO 3166-1 (1997), <i>Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes</i>
P	m	DR-M1401-2 Town	Telcordia Technologies		M.1401/§6	Definition of Town object class reference to Site object class should be “A Town’s subordinate Site is a”

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
P	m	DR-M1401-3 Conventions	Telcordia Technologies		M.1401/§5	<p>Replace text with a more complete explanation of the conventions used in Rec. M.1401 as follows:</p> <p>Figure 1 shows boxes containing object class labels to indicate object classes. Lines supported with a reversed arrowhead indicate subordinate object classes. Lines with two-way arrows indicate references between object classes. A dashed one-way arrow with an S at the arrowhead indicates a schema reference and is here used for stating recursion.</p> <p>The text that follows Figure 1 includes a label and explanation for each class in the schema. A class can be an object class, an attribute class, or a reference class. The level of each class is depicted in the text by indentations (5 mm) of the class label, supported with dashes, where the number of indentations and dashes indicates the level of a given class within the schema. Therefore, each class label has a given indentation based on the Figure 1 schema graph.</p> <p>Labels of data items that are subordinate to or referenced from a given object class are presented in the following sequence: 1) alphabetized object class attributes, 2) alphabetized object class references, and 3) alphabetized object classes that are contained within the given object class at the next lower level.</p> <p>Textual definitions and explanations of object classes, attributes and references are provided in paragraphs that are adjusted 5 mm further to the right of their respective labels.</p> <p>Object class labels are underlined; attribute group and attribute labels are not underlined. Object class references are written in blue, italics and underlined.</p> <p>The formalism used in this document is introduced in Appendix III of Recommendation M.1401.</p>

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
						Data attributes shall consist of sequences of characters, each character being either alphabetic (A-Z) or numeric (0-9). Additional requirements for symbols are explicitly stated in format requirements for specific attributes. It is recommended that alphabetic characters be represented with upper case letters unless stated otherwise.
P	M	DR-M1401-4 Sorting	Telcordia Technologies		M.1401/§6	Object class attributes, references and subordinate object classes should be sorted as prescribed in DR-m1401-3.
P	m	DR-M1401-5 Amendment 1	Question 2/4		M.1401/§6	<p>Provide the following revision to Rec. M.1401:</p> <p>Replace</p> <ul style="list-style-type: none"> ▪ ▪ ▪ Local identifier <p>An identifier of the Cross-coupling site that is unique within an Operator, having up to 18 alphabetic and/or numeric characters. A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in M.1400 Amendment 1.</p> <p>with</p> <ul style="list-style-type: none"> ▪ ▪ ▪ Local identifier <p>An identifier of the Cross-coupling site that is unique within an Operator, having up to 18 alphabetic and/or numeric characters. A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in M.1400.</p>

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
P	M	DR-M1401-6 Local identifier	Question 2/4		M.1401/§6	<p>Provide the following addition to Rec. M.1401:</p> <p><u>Site relationship</u></p> <ul style="list-style-type: none"> ▪ Local identifier <p>The Local identifier of a Site relationship is an attribute group that uniquely identifies the Site relationship.</p> <p>A Local identifier is specific to an Operator, country or region. Such use of Local identifiers would be subject to national regulation and/or bilateral agreement between Operators, as stated in Rec. M.1400.</p> <p>Aliases of Cross-coupling site Identifiers are not permitted for communication between Operators of different Countries. However, Operators may exchange Local identifiers that are local to a specific Operator, country or region.</p> ▪ ▪ A-end <p>The A-end of the Local identifier uniquely identifies the Site relationship's subordinate A-end site, using its Local identifier.</p> ▪ ▪ B-end <p>The B-end of the Local identifier uniquely identifies the Site relationship's subordinate B-end site, using its Local identifier.</p>
<i>Rec. M.1401 (07/2006)</i>						
O	M	DR-M1401-7 Corporation	Question 2/4		M.1401/§6	Add a new root Corporation object class to Figure 1/M.1401, superior to the Country object class. Also provide text to define the Corporation object class.

<i>Status</i>	<i>Severity</i>	<i>Defect Number</i>	<i>Source</i>	<i>Guide Entry</i>	<i>Other reference</i>	<i>Subject Matter</i>
O	M	DR-M1401-8 Geographical area Name	Question 2/4		M.1401/§6	Editorial correction in the definition of Geographical area Name

Appendix B Defect Report Form

DEFECT REPORT FORM		
1.	Defect Report Number	<i>Recommendation code/numeric</i> <i>Note: Only the recommendation is identified by the defect report submitter</i>
2.	Source	<i>country, member etc</i> <i>Note: Filled out by the defect report submitter</i>
3.	Addressed to	<i>Rec. M.1400 or Rec. M.1401 Editor</i> <i>Note: Filled out by the defect report submitter</i>
4.	Date circulated by Editor	<i>Date</i> <i>Note: Filled out by Rec. M.1400 or Rec. M.1401 Editor</i>
5.	Deadline for response from Editor	<i>date</i> <i>Note: Determined by the Sub-working Party on Question 2/4</i>
6.	Defect Report Concerning	<i>Recommendation number and publication date</i> <i>Note: Filled out by the defect report submitter</i>
7.	Qualifier	<i>e.g. error, omission, clarification required</i> <i>Note: Filled out by the defect report submitter</i>
8.	Reference in document	<i>clause number</i> <i>Note: Filled out by the defect report submitter</i>
9.	Nature of defect	<i>complete, concise explanation of the perceived problem</i> <i>Note: Filled out by the defect report submitter</i>
10.	Solution proposed by source	<i>optional</i>
11.	Editors response	<i>any material proposed for processing as an erratum to, an amendment to or a commentary on the final Recommendation text. This will be included in Chapter 3 of a later version of this document.</i>