



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

STUDY GROUP 4

G.85x SERIES

TMN IMPLEMENTORS' GUIDE - DEFECTS AND RESOLUTIONS

VERSION 1.1 (19/1/2001)

ABSTRACT

This document is a compilation of reported defects in the 1996 and 1999 editions of the ITU-T G.85x series of Recommendations. It is intended to be an additional authoritative source of information for implementors to be 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.

Preface

The purpose of this Guide is to help the implementors of the 1996 and 1999 ITU-T Recommendations on TMN network level modelling of transport networks based on ODP (Open Distributed Processing). This Guide is not part of those Recommendations, but may be used in their ongoing maintenance.

This is the first version of this guide, which was produced following the 2000 WP 4/4 meeting.

Items marked with an asterisk (*) will be added to the Guide or modified for the next Version.

Every change to the Recommendations are identified with bullets having reference numbers of the form xyz where x is a letter which corresponds to one of the ITU-T G.85x series Recommendations, y is a letter which corresponds to one of the ITU-T G.85x.y Recommendations and z 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.ch>) below the ITU-T SG 4 entry.

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

TABLE OF CONTENTS

1. INTRODUCTION	5
1. 1. Background	5
1. 2. Scope of the Guide	5
1. 3. Contacts and Distribution of the Guide	5
2. DEFECT REPORT AND RESOLUTION PROCEDURES	9
2. 1. Submission of defects	9
2. 2. Resolution of Defects	9
2. 3. Defect report register	10
3. IMPLEMENTATION GUIDANCE	10
A Changes to Rec G.851 series	11
Aa Changes to Rec G.851.1 (1996)	11
B Changes to Rec G.852 series	11
Ba Changes to Rec G.852.1 (1996)	11
Bb Changes to Rec G.852.2 (1999)	11
Bc Changes to Rec G.852.3 (1999)	11
Bd Changes to Rec G.852.6 (1999)	11
Be Changes to Rec G.852.8 (1999)	11
Bf Changes to Rec G.852.10 (1999)	11
Bg Changes to Rec G.852.12 (1999)	11
C Changes to Rec G.853 series	11
Ca Changes to Rec G.853.1 (1999)	11
Cb Changes to Rec G.853.2 (1996)	11
Cc Changes to Rec G.853.3 (1999)	11
Cd Changes to Rec G.853.6 (1999)	11

Ce Changes to Rec G.853.8 (1999)	11
Cf Changes to Rec G.853.10 (1999)	11
Cg Changes to Rec G.853.12 (1999)	11
D Changes to Rec G.854 series	11
Da Changes to Rec G.854.1 (1996)	11
Db Changes to Rec G.854.3 (1999)	11
Dc Changes to Rec G.854.6 (1999)	11
Dd Changes to Rec G.854.8 (1999)	11
De Changes to Rec G.854.10 (1999)	11
Df Changes to Rec G.854.12 (1999)	11
E Changes to Rec G.855 series	11
Ea Changes to Rec G.855.1 (1999)	11
APPENDIX A TMN DEFECT REPORT REGISTER	18
APPENDIX B TMN DEFECT REPORT FORM	21

1. Introduction

1. 1. Background

This Guide concerns the ITU-T G.85x series of Recommendations on Telecommunications Management Network (TMN).

This Guide is informal in nature and the Guide is not an ITU-T Recommendation. The information it contains will serve as an information source for the ITU-T SG 4, who is responsible for maintaining the G.85x series of TMN Recommendations, and other users both within and outside of the ITU-T. The changes are expected to be included into future versions of the 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.

Initially, the Guide is limited to defects concerning information models and implementation conformance statements proformas.

1. 3. Contacts and Distribution of the Guide

This Guide will be made available at ITU-T SG4 meetings as well as meeting of ITU-T WP4/4. In addition copies of this Guide, can in general, also be made available from one's national representative for ITU-T. Copies may also be obtained from other agencies.

Contacts:

ITU-T WP 4/4 Chairman

Lakshmi G. Raman
ADC Telecommunications
4900 West 78th Street
Minneapolis, Minnesota 55435
United States

Tel. +1 612 946 2090
Fax. +1 612 946 3590
Email: lakshmi@adc.com

ITU-T Q 18/4 Rapporteur

Terje Henriksen
Telenor R&D
PO box 83
N2007 Kjeller
NORWAY

Tel. +47 63 84 86 82
Fax. +47 63 81 00 76
Email: terje-fredrik.henriksen@telenor.com

Implementors' Guide Editor

Tatsuhiko Yoshida
NTT Network Service Systems Laboratories
9-11, Midori-Cho 3-Chome
Musashino-Shi, Tokyo 180-8585
Japan

Tel. +81 422 59 6736
Fax. +81 422 59 4475
Email: Yoshida.Tatsuhiko@lab.ntt.co.jp

ITU-T SG4 Secretariat

Ardhendu M. Ganguli
Study Group 4
Telecommunications Standardization Bureau
International Telecommunications Union
Place des Nations
CH-1211 Geneva 20
Switzerland

Tel. +41 22 730 58 82
Fax. +41 22 730 58 53
Email: ganguli@itu.ch

Defect group leaders

This list includes the names of leaders for Recommendations. Not all of the Recommendations may have defects raised against them and leaders are not identified for all Recommendations. However, whenever a defect is raised, a defect group leader will be identified for the relevant Recommendation.

Recommendation	Defect group leader	
Rec. G.851.1 Management of the transport network - Application of the RM-ODP framework	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.852.1 Enterprise viewpoint for simple subnetwork connection management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.852.2 Enterprise viewpoint description of transport network resource model	Tatsuhiko Yoshida NTT Network Service Systems Laboratories 9-11, Midori-Cho 3-Chome Musashino-Shi, Tokyo 180-8585 Japan	Tel. +81 422 59 6736 Fax. +81 422 59 4475 Email: Yoshida.Tatsuhiko@lab.ntt.co.jp

Rec. G.852.3 Enterprise viewpoint for topology management	Andy Walsh Telcordia Technologies 331 Newman Springs Rd. Red Bank, NJ 07701 USA	Tel. +1-732-758-5648 Fax. +1-732-758-4344 Email: awalsh@telcordia.com
Rec. G.852.6 Enterprise viewpoint for trail management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.852.8 Enterprise viewpoint for pre-provisioned adaptation management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.852.10 Enterprise viewpoint for pre-provisioned link connection management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.852.12 Enterprise viewpoint for pre-provisioned link management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.853.1 Common elements of the information viewpoint for the management of a transport network	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.853.2 Subnetwork connection management information viewpoint	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.853.3 Information viewpoint for topology management	Andy Walsh Telcordia Technologies 331 Newman Springs Rd. Red Bank, NJ 07701 USA	Tel. +1-732-758-5648 Fax. +1-732-758-4344 Email: awalsh@telcordia.com

Rec. G.853.6 Information viewpoint for trail management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.853.8 Information viewpoint for pre-provisioned adaptation management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.853.10 Information viewpoint for pre-provisioned link connection management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.853.12 Information viewpoint for pre-provisioned link management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.854.1 Computational interfaces for basic transport network model	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.854.3 Computational viewpoint for topology management	Andy Walsh Telcordia Technologies 331 Newman Springs Rd. Red Bank, NJ 07701 USA	Tel. +1-732-758-5648 Fax. +1-732-758-4344 Email: awalsh@telcordia.com
Rec. G.854.6 Computational viewpoint for trail management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com
Rec. G.854.8 Computational viewpoint for pre-provisioned adaptation management	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje-fredrik.henriksen@telenor.com

Rec. G.854.10 Computational viewpoint for pre-provisioned link connection management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.854.12 Computational viewpoint for pre-provisioned link management	Bernd Zeuner Deutsche Telekom T-Nova, TZ Darmstadt 64307 Darmstadt Germany	Tel. +49 61 51 83 37 09 Fax. +49 61 51 83 19 875 Email: bernd.zeuner@telekom.de
Rec. G.855.1 GDMO engineering viewpoint for the generic network level model	Terje Henriksen Telenor R&D PO box 83 N2007 Kjeller NORWAY	Tel. +47 63 84 86 82 Fax. +47 63 81 00 76 Email: terje- fredrik.henriksen@telenor.com

1.4 History log

Item	Location	Reason
1.0	Geneva, February 2000	First version of the Guide
1.1	Geneva, January 2000	To update G.855.1 errors in order to reflect M.3120 and M.3100 discussions in August 2000 WP 4/4 and 5/4 meeting

2. Defect Report and Resolution Procedures

2.1. Submission of defects

Any implementor of the TMN Recommendations is invited to submit TMN 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 ITU-T WP4/4 Chairman. Each form should cover a single defect. It is important that the form is completed accurately, especially the sections which relate to the base material against which the defect report is being raised.

2.2. Resolution of Defects

A TMN defect resolution group is established for each of the Recommendations. In some cases a group covers more than one Recommendation.

Following agreement on a resolution, within the defect resolution group, the proposed resolution may require approval of ITU-T WP4/4 and ITU-T SG4.

This Guide will contain resolutions as they are agreed by the defect resolution group. 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 can not be given to an individual submitting defect reports, and that the procedure is not intended as a consulting service.

2. 3. Defect report register

New defect reports will be included in the report of the relevant Question or Working Party.

3. Implementation Guidance

Remember that this Guide is intended to be an authoritative source of information for implementors of the TMN Recommendations, 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 xyz where x is a letter which corresponds to one of the ITU-T G.85x series Recommendations, y is a letter which corresponds to one of the ITU-T G.85x.y Recommendations and z is a number which identifies the particular change 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 Annex 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.

A Changes to Rec G.851 series

Aa Changes to Rec G.851.1 (1996)
None

B Changes to Rec G.852 series

Ba Changes to Rec G.852.1 (1996)
None

Bb Changes to Rec G.852.2 (1999)
None

Bc Changes to Rec G.852.3 (1999)
None

Bd Changes to Rec G.852.6 (1999)
Bd1 DR-G85xTm-1

Section 6.4.1. Set up point-to-point trail

It was found that the following Action Policy was missing, when 'monitored trail management' was being studied at the Darmstadt meeting in August 1999. Therefore, it must be added.

PERMISSION directionality

"The caller may specify the directionality of the trail, i.e., unidirectional or bidirectional."

Be Changes to Rec G.852.8 (1999)
None

Bf Changes to Rec G.852.10 (1999)
None

Bg Changes to Rec G.852.12 (1999)
None

C Changes to Rec G.853 series

Ca Changes to Rec G.853.1 (1996)
Ca2 DR-G85xCiv-1

New Section 7.9 operationalState

It was found that this attribute was missing, when 'monitored trail management' was being studied at the Darmstadt meeting in August 1999. The following new section should be added.

7.9 operationalState

DEFINITION

"The operationaState attribute characterises the operability of the associated resource. The semantic of this attribute is imported from X.721: 1992 operationaState attribute."

STATE

disabled

“The resource is totally inoperable and unable to provide service to the user(s).”

enabled

“The resource is partially or fully operable and available for use.”

Ca3 DR-G85xCiv-2

Section 8.22 linkEndHasNetworkCTPs

It was found that topologicalLinkEnd should be added to linkEndHasNetworkCTPs relationship, when ‘sub-network connection protection management’ was being studied at the Darmstadt meeting in August 1999. The underlined ‘topologicalLinkEnd’ should be added to containerLE as follows:

This relationship type is related to the following enterprise entity:

<COMMUNITY:tem, ROLE:link end, PROPERTY:pre-provisioned capacity>

DEFINITION

"The linkEndHasNetworkCTPs relationship class describes the relationship that exists between a linkEnd/topologicalLinkEnd and the networkCTPs that are part of it."

ROLE

containerLE

"Played by an instance of the <linkEnd> or <topologicalLinkEnd> information object type or subtype."

elementCTP

"Played by instances of the <networkCTP> information object type or subtype."

Ca4 DR-G85xCiv-3

Section 6.9 networkCTP

The change was proposed in support of protection management requirements at the Darmstadt meeting in August 1999. The underlined <networkCTPIsProtected> should be added to POTENTIAL_RELATIONSHIPS as follows:

POTENTIAL_RELATIONSHIPS

<linkConnectionIsBoundTo>

<linkConnectionIsTerminatedByPointToPoint>

<linkEndHasNetworkCTPs>

<networkCTPIsBundleOfNetworkCTPs>

<networkTTPAdaptsNetworkCTP>

<subnetworkTPIsRelatedToExtremity>

<networkCTPIsProtected>

Ca5 DR-G85xCiv-3

Section 6.18 networkTTP

The change was proposed in support of protection management requirements at the Darmstadt meeting in August 1999. The underlined <networkTTPIsProtected> should be added to POTENTIAL_RELATIONSHIPS as follows:

```
POTENTIAL_RELATIONSHIPS
<accessGroupIsMadeOfNetworkTTPs>
<linkConnectionIsBoundTo>
<networkTTPAdaptsNetworkCTP>
<subnetworkTTPsRelatedToExtremity>
<topologicalLinkEndIsSupportedByNetworkTTP>
<trailIsTerminatedByPointToPoint>
<networkTTPIsProtected>
```

Ca6 DR-G85xCiv-3

Section 6.26 subnetworkConnection

The change was proposed in support of protection management requirements at the Darmstadt meeting in August 1999. The underlined <subnetworkConnectionIsProtected> should be added to POTENTIAL_RELATIONSHIPS as follows:

```
POTENTIAL_RELATIONSHIPS
<linkConnectionIsMadeOfTransportEntities>
<sncBidIsSupportedByUnis>
<subnetworkConnectionIsBundleOfSubnetworkConnections>
<subnetworkConnectionIsMadeOfTransportEntities>
<subnetworkConnectionIsTerminatedByPointToPoint>
<subnetworkHasSubnetworkConnections>
<tandemConnectionIsMadeOfTransportEntities>
<trailIsMadeOfTransportEntities>
<subnetworkConnectionIsProtected>
```

Ca7 DR-G85xCiv-3

Section 6.35 trail

The change was proposed in support of protection management requirements at the Darmstadt meeting in August 1999. The underlined <trailIsProtected> should be added to POTENTIAL_RELATIONSHIPS as follows:

```
POTENTIAL_RELATIONSHIPS
<linkConnectionIsSupportedByTrail>
<topologicalLinkIsSupportedByTrail>
<trailIsBundleOfTrails>
<trailIsMadeOfTransportEntities>
<trailIsTerminatedByPointToPoint>
<trailIsProtected>
```

Ca8 DR-G85xCiv-3

Section 8 Information relationship type definitions

The change was proposed in support of protection management requirements at the Darmstadt meeting in August 1999. The following relationship types, 'networkCTPIsProtected', 'networkCTPIsProtected', 'networkCTPIsProtected' and 'networkCTPIsProtected', should be added to section 8.

8.xx_networkCTPIsProtected

This relationship type is related to the following enterprise entity:

<COMMUNITY:tem, ROLE: connection termination point, PROPERTY:protection>

DEFINITION

ROLE

protectedNetworkCTP

"Played by an instance of the <networkCTP> or information object type or subtype."

protectingNetworkCTP

"Played by an instance of the <networkCTP> information object type or subtype."

workerNetworkCTP

"Played by an instance of the <networkCTP> information object type or subtype."

INVARIANT

inv_protectedCTPRoleCardinality

"One and only one instance of the role *protectedNetworkCTP* must participate in the relationship."

inv_protectingCTPRoleCardinality

"One and only one instance of the role *protectingNetworkCTP* must participate in the relationship."

inv_workerCTPRoleCardinality

"One and only one instance of the role *workerNetworkCTP* must participate in the relationship."

inv_roles

"In an instance of the relationship, an instance can not play both roles: *protectingNetworkCTP* and *workerNetworkCTP*."

inv_signalIdentification

"In a given relationship instance of *networkCTPIsProtected*, the information objects playing the role *protectedNetworkCTP*, *protectingNetworkCTP*, and *workerNetworkCTP* must have all the same *signalIdentification* value."

inv_directionality

"The objects involved in the relationship must have a compatible directionality."

8.xx_networkTTPIsProtected

This relationship type is related to the following enterprise entity:

<COMMUNITY:tem, ROLE: trail termination point, PROPERTY:protection>

DEFINITION

ROLE

protectedNetworkTTP

"Played by an instance of the <networkTTP> or information object type or subtype."

protectingNetworkCTP

"Played by an instance of the <networkCTP> information object type or subtype."

workerNetworkCTP

"Played by an instance of the <networkCTP> information object type or subtype."

INVARIANT

inv_protectedTTPRoleCardinality

"One and only one instance of the role *protectedNetworkTTP* must participate in the relationship."

inv_protectingCTPRoleCardinality

"One and only one instance of the role *protectingNetworkCTP* must participate in the relationship."

inv_workerCTPRoleCardinality

"One and only one instance of the role *workerNetworkCTP* must participate in the relationship."

inv_roles

"In an instance of the relationship, an instance can not play both roles:
protectingNetworkCTP and *workerNetworkCTP*."

inv_signalIdentification

"In a given relationship instance of *networkTTPIsProtected*, the information objects playing the role *protectedNetworkTTP*, *protectingNetworkCTP*, and *workerNetworkCTP* must have all the same signalIdentification value."

inv_directionality

"The objects involved in the relationship must have a compatible directionality."

8.xx subnetworkConnectionIsProtected

This relationship type is related to the following enterprise entity:

<COMMUNITY:tem, ROLE:sub-network connection, PROPERTY:protection>

DEFINITION

"The *subnetworkConnectionIsProtected* relationship class describes the relationship that exists between a protected *subnetworkConnection*, a protecting *subnetworkConnection* and a worker *subnetworkConnection*."

ROLE

protectedSNC

"Played by an instance of the <*subnetworkConnection* > information object type or subtype."

protectingSNC

"Played by an instance of the <*subnetworkConnection* > information object type or subtype."

workerSNC

"Played by an instance of the <*subnetworkConnection* > information object type or subtype."

INVARIANT

inv_protectedSNCRoleCardinality

"One and only one instance of the role *protectedSNC* must participate in the relationship."

inv_protectingSNCRoleCardinality

"One and only one instance of the role *protectingSNC* must participate in the relationship."

inv_workerSNCRoleCardinality

"One and only one instance of the role *workerSNC* must participate in the relationship."

inv_roles

"In an instance of the relationship, an instance can not play both roles: *protectingSNC* and *workerSNC*."

inv_signalIdentification

"In a given relationship instance of *subnetworkConnectionIsProtected*, the information objects playing the role *protectedSNC*, *protectingSNC*, and *workerSNC* must have all the same signalIdentification value."

inv_directionality

"The objects involved in the relationship must have a compatible directionality."

8.xx trailsProtected

This relationship type is related to the following enterprise entity:

<COMMUNITY:tem, ROLE:trail, PROPERTY:protection>

DEFINITION

"The *trailsProtected* relationship class describes the relationship that exists between a protected trail, a protecting trail and a worker trail."

ROLE

protectedTrail

“Played by an instance of the <trail> information object type or subtype.”

protectingTrail

“Played by an instance of the <trail> information object type or subtype.”

workerTrail

“Played by an instance of the <trail> information object type or subtype.”

INVARIANT

inv_protectedTrailRoleCardinality

"At least one instance of the role *protectedTrail* must participate in the relationship."

inv_protectingTrailRoleCardinality

"At least one instance of the role *protectingTrail* must participate in the relationship."

inv_workerSNCRoleCardinality

"At least one instance of the role *workerSNC* must participate in the relationship."

inv_roles

"In an instance of the relationship, an instance can not play both roles: *protectingSNC* and *workerSNC*."

inv_signalIdentification

"In a given relationship instance of subnetworkConnectionIsProtected, the information objects playing the role *protectedSNC*, *protectingSNC*, and *workerSNC* must have all the same signalIdentification value."

inv_directionality

"The objects involved in the relationship must have a compatible directionality"

Cb Changes to Rec G.853.2 (1999)

None

Cc Changes to Rec G.853.3 (1999)

None

Cd Changes to Rec G.853.6 (1999)

None

Ce Changes to Rec G.853.8 (1999)

None

Cf Changes to Rec G.853.10 (1999)

None

Cg Changes to Rec G.853.12 (1999)

None

D Changes to Rec G.854 series

None

E Changes to Rec G.855 series

Ea Changes to Rec G.855.1 (1999)

Ea1 DR-G855.1-1

Section 10.2 ASN.1 Module

The change was proposed in the work on the CORBA/IDL version of M.3100 including M.3100 Amendment 1 and selected parts from G.855.1. at the Torrance meeting in August 2000. In the basicLayerNetworkDomain object the “establishLogicalLinkInformation” and “establishTopologicalLinkInformation” actions has layerNetworkDomain reference as an information field. It was suggested that this item is not required as the same information is captured by the managed object instance information of the action.

```
EstablishLogicalLinkInformation ::= SEQUENCE {
    layerNetworkDomain ObjectInstance,
    aEnd LinkEnd,
    zEnd LinkEnd,
    suppliedUserIdentifier [1] UserIdentifier OPTIONAL,
    suppliedUserLabel [2] GraphicString OPTIONAL,
    suppliedDirection [3] LinkDirectionality OPTIONAL,
    ...
}
```

```
EstablishTopologicalLinkInformation ::= SEQUENCE {
    layerNetworkDomain ObjectInstance,
    aEnd LinkEnd,
    zEnd LinkEnd,
    suppliedUserIdentifier [1] UserIdentifier OPTIONAL,
    suppliedUserLabel [2] GraphicString OPTIONAL,
    suppliedDirection [3] Directionality OPTIONAL,
    ...
}
```

Ea2 DR-G855.1-2

Section 10.2 ASN.1 Module

The change was proposed in the work on the CORBA/IDL version of M.3100 including M.3100 Amendment 1 and selected parts from G.855.1. at the Torrance meeting in August 2000. Usage cost (that is part of abstractLink) is not used in the following actions:

- 1) setupTrail
- 2) establishLogicalLink & establishLogicalLinkAndEnds
- 3) establishTopologicalLink & establishTopologicalLinkAndEnds

It was suggested to include usageCost in these actions.

IMPORTS

...

...

Capacity, Capacities, Count, CTPList, LinkConnectionList, LinkEnd, None, UsageCost,
 UserIdentifier, LinkDirectionality, ConnectivityEndPoint, TPLList, SignalId FROM
 M3100ASN1TypeModule2 {itu-t recommendation m gnm(3100) informationModel(0) asn1Modules(2)
 asn1Module2(1)}

SetupTrailInformation ::= SEQUENCE {

aEnd	SET OF ConnectivityEndPoint,
zEnd	SET OF ConnectivityEndPoint,
directionality	Directionality,
additionalInformation	[2] AdditionalInformation OPTIONAL,
qofConnectivityService	[3] QofConnectivityService OPTIONAL,
userId	[0] UserIdentifier OPTIONAL,
userLabel	[1] UserLabel OPTIONAL,
<u>usageCost</u>	<u>[4] UsageCost OPTIONAL,</u>
...	
}	

EstablishLogicalLinkInformation ::= SEQUENCE {

layerNetworkDomain	ObjectInstance,
aEnd	LinkEnd,
zEnd	LinkEnd,
suppliedUserIdentifier	[1] UserIdentifier OPTIONAL,
suppliedUserLabel	[2] GraphicString OPTIONAL,
suppliedDirection	[3] LinkDirectionality OPTIONAL,
<u>usageCost</u>	<u>[4] UsageCost OPTIONAL,</u>
...	
}	

EstablishTopologicalLinkInformation ::= SEQUENCE {

layerNetworkDomain	ObjectInstance,
aEnd	LinkEnd,
zEnd	LinkEnd,
suppliedUserIdentifier	[1] UserIdentifier OPTIONAL,
suppliedUserLabel	[2] GraphicString OPTIONAL,

```
suppliedDirection          [3] Directionality OPTIONAL,  
usageCost                 [4] UsageCost             OPTIONAL,  
...  
}
```

Appendix A TMN 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 Defect Resolution Group has not yet come to an agreement.

A/U Agreed/Unanimous

- Proposed solution agreed by everyone in the Defect Resolution Group
- Pending approval by affected Study Group

A/C Agreed/Consensus

- Consensus solution agreed by the Defect Resolution Group and documented in this version of the Implementors' Guide.
- Pending approval by affected Study Group

A Agreed

- Proposed solution agreed by the Defect Resolution Group
- Pending approval by affected Study Group

Note: This status value is no longer to be used and has been replaced with the A/U and A/C status values.

C Complete

- Defect resolution approval by full Study Group
- Final resolution reflected in this version of Implementor's 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:

- Pure syntax errors in GDMO templates (e.g. missing semicolons)
- Obvious misalignment in names of attributes in the GDMO and ASN.1
- Missing ASN.1 productions where the text is clear as to the syntax, semantics and data type
- Clarifications of ambiguities in the text if supported by the formal definitions
- Typographical errors.

M Major

- All other defects are classified as major.

ITU-T Recommendation G.85x

<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-G85xTem-1	Marconi Communications		ETSI meeting in October 1999	Addition of protection level information (highly protected, protected, unprotected and preemptible) to LC and SNC (Note) Bb1, Bb2, Ca1 will be assigned as guide entry. The tentative texts are provided below.
A/C	M	DR-G85xTm-1	Telenor	Bd1	DAR – 7 ‘monitored trail management’	Addition of Action Policy to ‘Section 6.4.1. Set up point-to-point trail’ of G.852.6
A/C	M	DR-G85xCiv-1	Telenor	Ca2	DAR – 7 ‘monitored trail management’	New section 7.9 operationalState should be added.
A/C	M	DR-G85xCiv-2	Marconi Communications	Ca3	DAR – 19 ‘sub-network connection protection management’	Addition of topologicalLinkEnd to containerLE in “8.22 linkEndHasNetworkCTPs”
A/C	m	DR-G85xCiv-3	Marconi Communications	Ca4, Ca5, Ca6, Ca7, Ca8	DAR – 19 ‘sub-network connection protection management’	To support protection management requirements
A/C	m	DR-G855.1-1	Japan	Ea1	WP 4/4 and 5/4 meeting in August 2000	In the basicLayerNetworkDomain object the “establishLogicalLinkInformation” and “establishTopologicalLinkInformation” actions has layerNetworkDomain reference as an information field. It was suggested that this item is not required as the same information is captured by the managed object instance information of the action.
A/C	m	DR-G855.1-2	Japan	Ea2	WP 4/4 and 5/4 meeting in August 2000	To include usageCost in some actions

(Note) The following text will be provided.

Bb1 DR-G85xTem-1

Section 6.2.7 Link connection

It was found that G.852.2 (TEM) and G.853.1 (CIV) should be modified, when 'sub-network connection protection management' was being studied at the ETSI meeting in October 1999.

Protection level information (highly protected, protected, unprotected and preemptible) should be added to the properties of Link Connection as follows:

The text will be provided by Mr. Foster (Marconi Communications).

Bb2 DR-G85xTem-1

Section 6.2.12 Subnetwork connection

See Ba1 on rationale.

Protection level information (highly protected, protected, unprotected and preemptible) should be added to the properties of Subnetwork Connection as follows:

The text will be provided by Mr. Foster (Marconi Communications).

Ca1 DR-G85xTem-1

Section 2.36 transportConnection

See Bb1 on rationale.

Protection level information (highly protected, protected, unprotected and preemptible) should be added to the ATTRIBUTE of transportConnection as follows, because linkConnection and subnetworkConnection are the sub-type of the transportConnection information object type:

The text will be provided by Mr. Foster (Marconi Communications).

Appendix B TMN 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>Defect editors group reference</i>
<i>Note: Filled out by the defect report submitter</i> |
| 4. | (a) ITU-T TSB:
(b) ITU-T WP: | <i>administrative body reference</i>

<i>Note: Not filled out by the defect report submitter</i> |
| 5. | Date circulated by administrative body | <i>date</i>

<i>Note: Filled out by the TSB or WP</i> |
| 6. | Deadline for response from editor: | <i>date</i>
<i>Note: Determined by the Defect Resolution Group</i> |
| 7. | Defect Report Concerning: | <i>Recommendation number and publication date</i>
<i>Note: Filled out by the defect report submitter</i> |
| 8. | Qualifier: | <i>e.g. error, omission, clarification required</i>
<i>Note: Filled out by the defect report submitter</i> |
| 9. | Reference in document: | <i>clause number</i>
<i>Note: Filled out by the defect report submitter</i> |
| 10. | Nature of defect:
<i>perceived problem</i> | <i>complete, concise explanation of the</i>

<i>Note: Filled out by the defect report submitter</i> |
| 11. | Solution proposed by source: | <i>optional</i> |
| 12. | 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> |