INTERNATIONAL TELECOMMUNICATION UNION

ITU-T G.853.10

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TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SERIES G: TRANSMISSION SYSTEMS AND MEDIA, DIGITAL SYSTEMS AND NETWORKS

Digital transmission systems – Digital networks – Management of transport network

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Information viewpoint for pre-provisioned link connection management

ITU-T Recommendation G.853.10

(Previously CCITT Recommendation)

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ITU-T RECOMMENDATION G.853.10

INFORMATION VIEWPOINT FOR PRE-PROVISIONED LINK CONNECTION MANAGEMENT

Summary

The pre-provisioned link connection management community is used to assign transport entities (link connections or connection termination points) to a caller and to control and update the available capacity of the linking entity (link or link end) that contains the transport entities. The available capacity of the linking entity contains all the unassigned transport entities. This community should be used in the case where transport entities have already been provisioned inside the linking entity using the pre-provisioned adaptation management service (G.85x.8 series of Recommendations).

The capability of having pre-provisioned transport entities is available in technologies such as SDH or WDM.

Source

ITU-T Recommendation G.853.10 was prepared by ITU-T Study Group 4 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 26th of March 1999.

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 term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration, ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992)*.

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 G.853.10

INFORMATION VIEWPOINT FOR PRE-PROVISIONED LINK CONNECTION MANAGEMENT

(Geneva, 1999)

1 Scope

This information viewpoint specification is related to the pre-provisioned linkconnection management enterprise specification defined in Recommendation G.852.10.

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 references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

[1] ITU-T Recommendation G.851.1 (1996), *Management of the transport network – Application of the RM-ODP framework.*

[2] ITU-T Recommendation G.853.1 (1999), *Common elements of the information viewpoint for the management of a transport network.*

[3] ITU-T Recommendation G.852.10 (1999), *Enterprise viewpoint for pre-provisioned link connection management.*

[4] ITU-T Recommendation G.854.10 (1999), *Computational viewpoint for pre-provisioned link connection management.*

3 Definitions

None.

4 Abbreviations

This Recommendation uses the following abbreviations.

CTP	Connection Termination Point
Id	Identifier
imp	imported
LC	Link Connection
LE	Link End
LND	Layer Network Domain
pam	pre-provisioned adaptation management
plcm	pre-provisioned link connection management
RM-ODP	Reference Model for Open Distributed Processing
UML	Unified Modelling Language

5 Conventions

None.

6 Class diagrams

6.1 UML class diagram representing relationships between classes

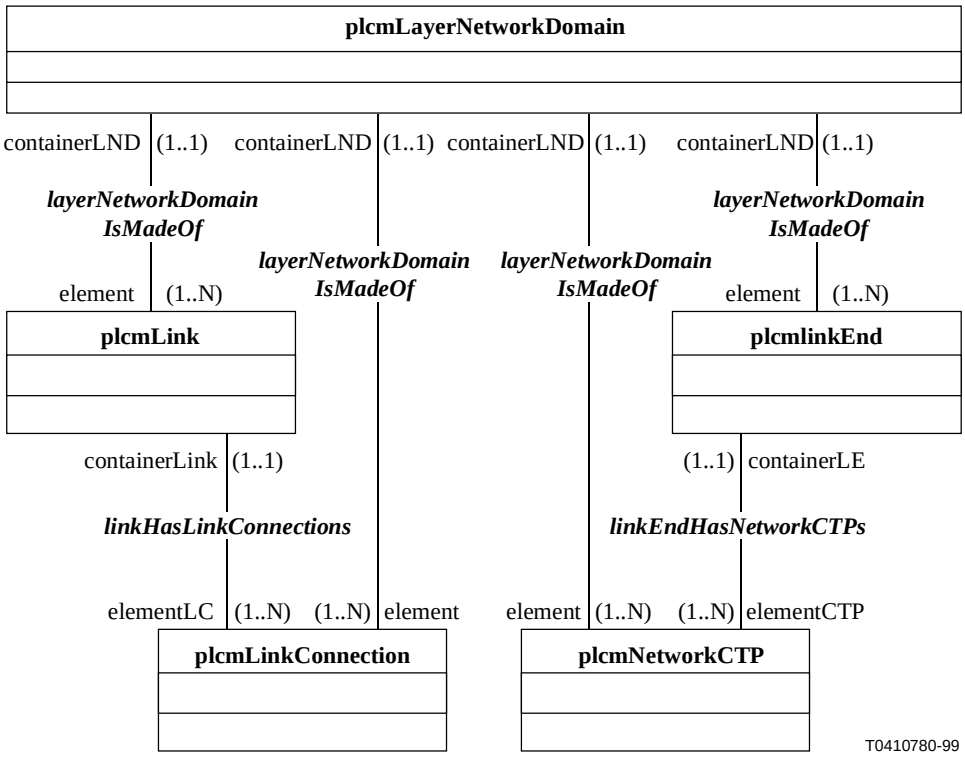

Figure 1/G.853.10 – UML class diagram with relationships between classes

6.2 UML class diagram representing the Inheritance Hierarchy

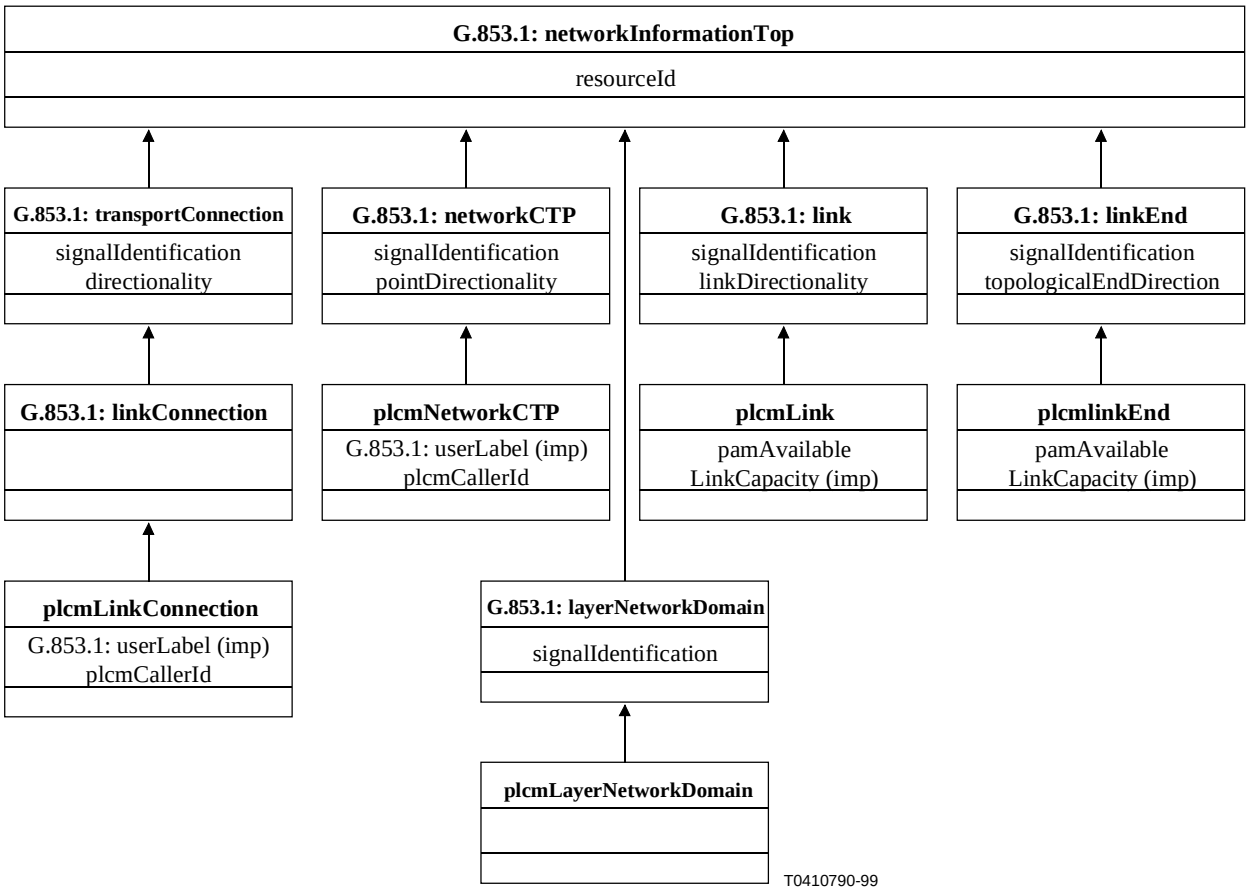

Figure 2/G.853.10 – UML class diagram representing the Inheritance Hierarchy

7 Label references

Full label reference	Local label reference
<"Rec. G.853.1", INFORMATION_OBJECT: layerNetworkDomain>	layerNetworkDomain
<"Rec. G.853.1", INFORMATION_OBJECT: link>	link
<"Rec. G.853.1", INFORMATION_OBJECT: linkConnection>	linkConnection
<"Rec. G.853.1", INFORMATION_OBJECT: linkEnd>	linkEnd
<"Rec. G.853.1", INFORMATION_OBJECT: networkCTP>	networkCTP
<"Rec. G.853.1", INFORMATION_RELATIONSHIP: layerNetworkDomainIsMadeOf>	layerNetworkDomainIsMadeOf
<"Rec. G.853.1", INFORMATION_RELATIONSHIP: linkHasLinkConnections>	linkHasLinkConnections
<"Rec. G.853.1", INFORMATION_RELATIONSHIP: linkEndHasNetworkCTPs>	linkEndHasNetworkCTPs
<"Rec. G.853.8", ATTRIBUTE: pamAvailableLinkCapacity>	pamAvailableLinkCapacity
<"Rec. G.853.1", ATTRIBUTE: userLabel>	userLabel

8 Information object class definitions

8.1 plcmLayerNetworkDomain

<COMMUNITY: Pre-provisioned LinkConnection Management, ROLE: layer network domain>

DEFINITION
"This object class is derived from <layerNetworkDomain>."

ATTRIBUTE
-- none additional

RELATIONSHIP
<layerNetworkDomainIsMadeOf>

8.2 plcmLink

<COMMUNITY: Pre-provisioned LinkConnection Management, ROLE: linking entity>

DEFINITION
"This object class is derived from <link>."

ATTRIBUTE
<pamAvailableLinkCapacity>
"pamAvailableLinkCapacity provides the number of free linkconnections in the plcmLink available for a client usage. This attribute is imported from "Rec. G.853.8", COMMUNITY: pre-provisioned adaptation management."

RELATIONSHIP
<layerNetworkDomainIsMadeOf>
<linkHasLinkConnections>

8.3 plcmLinkConnection

<COMMUNITY: Pre-provisioned LinkConnection Management, ROLE: transport entity>

DEFINITION
"This object class is derived from <linkConnection>."

ATTRIBUTE
<userLabel>
"<COMMUNITY: Pre-provisioned LinkConnection Management, COMMUNITY POLICY: useUserLabel and notifyUserLabelChange>
This attribute is imported from Recommendation G.853.1 and it is used to hold a user friendly name of the plcmLinkConnection."

<plcmCallerId>
"This attribute is used to indicate to which caller the plcmLinkConnection has been assigned. The initial value for this attribute is NULL."

RELATIONSHIP
<layerNetworkDomainIsMadeOf>
<linkHasLinkConnections>

8.4 plcmLinkEnd

<COMMUNITY: Pre-provisioned LinkConnection Management, ROLE: linking entity>

DEFINITION
"This object class is derived from <linkEnd>."

ATTRIBUTE
<pamAvailableLinkCapacity>
"pamAvailableLinkCapacity provides the number of free networkCTPs in the plcmLinkEnd available for a client usage. This attribute is imported from "Rec. G.853.8", COMMUNITY: pre-provisioned adaptation management."

RELATIONSHIP
<layerNetworkDomainIsMadeOf>
<linkEndHasNetworkCTPs>

8.5 plcmNetworkCTP

<COMMUNITY: Pre-provisioned LinkConnection Management, ROLE: transport entity>

DEFINITION
"This object class is derived from <networkCTP>."

ATTRIBUTE
<userLabel>
"<COMMUNITY: Pre-provisioned LinkConnection Management, COMMUNITY POLICY: useUserLabel and notifyUserLabelChange>
This attribute is imported from Recommendation G.853.1 and it is used to hold a user friendly name of the plcmNetworkCTP."

<plcmCallerId>
"This attribute is used to indicate to which caller the plcmNetworkCTP has been assigned. The initial value for this attribute is NULL."

RELATIONSHIP
<layerNetworkDomainIsMadeOf>
<linkEndHasNetworkCTPs>

9 Information relationship definitions

None additional.

10 Static schemas

None.

11 Dynamic schemas

None.

12 Attributes

12.1 plcmCallerId

<COMMUNITY: Pre-provisioned LinkConnection Management, ACTION: assign transport entities, OBLIGATION: callerId>
<COMMUNITY: Pre-provisioned LinkConnection Management, ACTION: de-assign transport entities, OBLIGATION: supplyCallerId>
<COMMUNITY: Pre-provisioned LinkConnection Management, ACTION: report transport entities change, OBLIGATION: informCallerId>

DEFINITION

"This attribute is used to indicate to which caller the transport entity has been assigned. When the transport entity is not assigned, the value has to be NULL. When the transport entity is assigned, the value has to be different from NULL."

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