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COLO TO COLO OR COLO TO POP BACKHAUL LEASED LINE

Provision of 34 Mbit/s digital links

Colo to Colo or Colo to PoP Backhaul leased lines

Provision of 34 Mbit/s digital links

SPECIFICATION USER NETWORK INTERFACE (TRANSMISSION)

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0. Document history

Every update of this document results in a complete new version with new version number and release date.

Version	Date	Main or important changes since previous version
1.0	12 JUN 2002	• First version

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1. Introduction

This document contains the technical specifications of the Proximus 34 Mbit/s Colo to Colo or Colo to PoP Backhaul Leased Line service. Basically, it is the intention of Proximus and the OLO to co-operate for the joint establishment of an end-to-end 34 Mbit/s leased line path.

These specifications are based on a generic model as shown in annex 1.

The Colo to Colo Backhaul Leased Line of Proximus is presented to the OLO via an "interface presentation" at the related End Point, namely the EP_{OLO}. These EPs comprise all physical connections and their technical access specifications that form part of the Proximus transmission network. The EP is presented by means of an electrical equipment which is an integral part of the Proximus Colo to Colo Backhaul Leased Line and which is referred to as the End Point Unit (EPU). For the description of the Proximus Colo to Colo Backhaul Leased Line service for 34 Mbit/s leased lines, the EPU is considered as being contained within the Proximus Colo to Colo Backhaul Leased Line.

The Colo to PoP Backhaul Leased Line of Proximus is presented to the OLO via an "interface presentation" at the related End Point, namely the EP_{OLO}. These EPs comprise all physical connections and their technical access specifications that form part of the Proximus transmission network. The EP is presented by means of an electrical equipment which is an integral part of the Proximus Colo to PoP Backhaul Leased Line and which is referred to as the End Point Unit (EPU). For the description of the Proximus Colo to PoP Backhaul Leased Line service for 34 Mbit/s leased lines, the EPU is considered as being contained within the Proximus Colo to PoP Backhaul Leased Line. On one end, the EPU is located in a LEX or in an AGE, on the other end, the EPU in located in a LEX and offer interface to the local tail to the PoP.

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2. Colo to Colo or Colo to PoP Backhaul Leased Line characteristics

2.1. Transfer rate

2.1.1. Leased line timing

There's no timing provided from the Proximus Colo to Colo or Colo to PoP Backhaul Leased Line. On the other hand, the Proximus Colo to Colo or Colo to PoP Backhaul Leased Line is capable of carrying timing provided by the OLO within the limits of 34,368 kbit/s ± 20 ppm as specified by ITU-T Recommendation G.703.

2.1.2. Information transfer rate

The Proximus Colo to Colo or Colo to PoP Backhaul Leased Line is capable of transferring an information rate of 34,368 kbit/s ± 20 ppm in each direction.

2.2. Information transfer susceptance

The Proximus Colo to Colo or Colo to PoP Backhaul Leased Line is capable of transferring unrestricted digital information.

2.3. Structure

The Proximus Colo to Colo or Colo to PoP Backhaul Leased Line shall not be structured by Proximus; the full bit rate of 34,368 kbit/s shall be available to the OLO for unrestricted digital information transfer.

2.4. Establishment of communication

Establishment or release of the Proximus Colo to Colo or Colo to PoP Backhaul Leased Line shall not require any protocol exchange or other intervention by the OLO.

2.5. Symmetry

The Proximus Colo to Colo or Colo to PoP Backhaul Leased Line shall be symmetrical, i.e. each direction of transmission shall have the same nominal characteristics, although the actual values shall be independent.

2.6. Connection configuration

The Proximus Colo to Colo or Colo to PoP Backhaul Leased Line configuration is point-to-point.

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2.7.   Network performance

2.7.1.   Transmission delay

The one way delay through the Proximus Colo to Colo or Colo to PoP Backhaul Leased Line shall be less than (5 + 0.01G) ms, where G is the geographical distance in kilometers.

2.7.2.   Jitter

The maximum jitter at the output port of the EP_{OLO} as well as the input jitter tolerance at the EP_{OLO} shall be as specified in ITU-T Recommendation G.823.

2.7.3.   Performance level

The overall end-to-end error performance level of the 34 Mbit/s leased line path shall be based on the model mentioned in ITU-T Recommendation G.826.

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3. End point interface presentation

3.1.   Physical characteristics

The physical connection arrangements for the EP_{OLO} of the Proximus 34,368 kbit/s digital Colo to Colo or Colo to PoP Backhaul Leased Line (75 Ohms version of the G.703-interface) shall consist of two 1.6/5.6 coax-connectors (one coaxial pair in each transmission direction) complying with IEC 169-13.

3.2.   Electrical characteristics

The electrical characteristics of the EP of the Proximus 34,368 kbit/s digital Colo to Colo or Colo to PoP Backhaul Leased Line are in accordance with ITU-T Recommendation G.703 (75 Ohms).

3.3.   ElectroMagnetic Compatibility (EMC)

The network interface presentation fulfils to the EMC requirements which are imposed under the EMC Directive 89/336/EEC.

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ANNEX 1

Generic model for
Colo to Colo or Colo to PoP Leased Line Specifications

$$EP_{OLO} \qquad\qquad\qquad\qquad\qquad EP_{OLO}$$

OLO Colocation room

OLO Colocation room

Proximus link

OR

Local Tail to OLO PoP

Colo to Colo or Colo to PoP Backhaul Leased Line

EP = End Point

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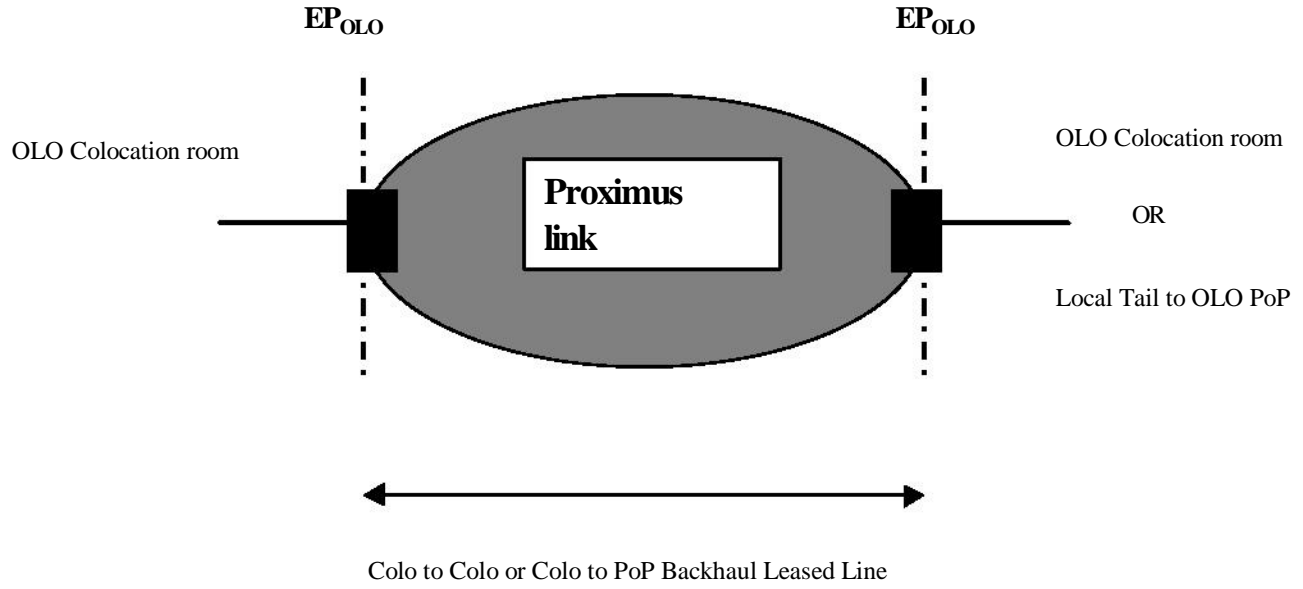
ANNEX 2

Definitions, symbols and abbreviations.

a) Definitions

For the purpose of these technical specifications, the following definitions apply:

Background block error ratio
The ratio of errored blocks over all blocks within a specified measuring period, where neither are counted during unavailability periods nor during severely errored seconds.

Errored block
A block with one or more bit errors.

Errored second
A one-second period with one or more errored blocks.

End Point (EP)
All physical connections which form part of the Proximus telecommunications network and which are necessary for access to and efficient communication through the Proximus Colo to Colo or Colo to PoP Backhaul Leased Line.

Severely errored second
A one-second period which contains at least 30% errored blocks or at least one severely disturbed period.

b) Symbols and abbreviations

For the purpose of these technical specifications, the following abbreviations apply:

CRC-4:	*Cyclic Redundancy Check-4 bit.*
DCE:	*Data Circuit-terminating Equipment. Data*
DTE:	*Terminal Equipment. Errored Seconds.*
ES:	*International Telecommunication Union. End*
ITU:	*Point.*
EP:	*Other Licensed Operator.*
OLO:	*Parts per million*
ppm:	*Réglement Général des Installations Electriques.*
RGIE:	*Severely Errored Seconds. Unit Interval.*
SES:	
UI:	

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