

# TLN WRO Specification type Document

< Specification of Device Management >



Document Housekeeping

Document Category and type

CAT	TYPE	DOC ID	Comment
General	SPEC	TLN-WRO-TA-G-S-PAAB	Specification type documents (-SPEC) are documents specifying logical / physical interfaces / protocols, etc., to which AO equipment/systems need to comply

Document Status

EDITION	DATE	STATUS
1.0	09.10.2013	Final
<u>2.0</u>	<u>29.12.2018</u>	<u>Final</u>

Legal Disclaimer

"This document constitutes an integral part of the Telenet Reference Offer for Basic TV / IDTV / BB and should be fully complied with by the Beneficiary at all times. Non compliance, incomplete or deviating application of this document by the Beneficiary, or his authorized agent, results in the suspension and ultimately termination of the Contract between Telenet and the Beneficiary.

At any time this document is susceptible to change by Telenet, Regulator's decision or by decision of a relevant judicial authority. Changes to this document will, depending on the circumstances for change, be appropriately notified to the Beneficiary and published on the Telenet website.

Telenet has appealed the CRC decisions of the VRM, BIPT and CSA of ~~1 July 2014~~ 29 June 2018 concerning the market analysis of the ~~broadband and~~ broadcasting market in Belgium and it consequently reserves all its rights in relation to this document."

Table of Contents

1 Abstract ..... 55

2 AO Device management Functional Description ..... 66

3 “In band” management access to AO devices..... 77

Table of Figures

2-1: Management Overview ..... 66

## List of Appendixes

This document may refer to further detailed documents that are added in Appendixes to this document.

A reference to an appendix is in this document highlighted with grey background.

The list with appendixes of this document:

None.

## List of References

This document may refer to external documents or information sources.

A reference to an external document or information source is in this document highlighted with grey background.

The list of referred external documents or information sources in this document:

Reference 1: APP\_G\_S\_PAAB\_A \_ Specification Device Management Detail

## Restricted information

This document may contain sections that are not public information and that can be made available only to parties that have executed specific NDA's.

Information that is subject to NDA is marked in this document as follows:

NDA

NDA

The information in this text box is available only under NDA

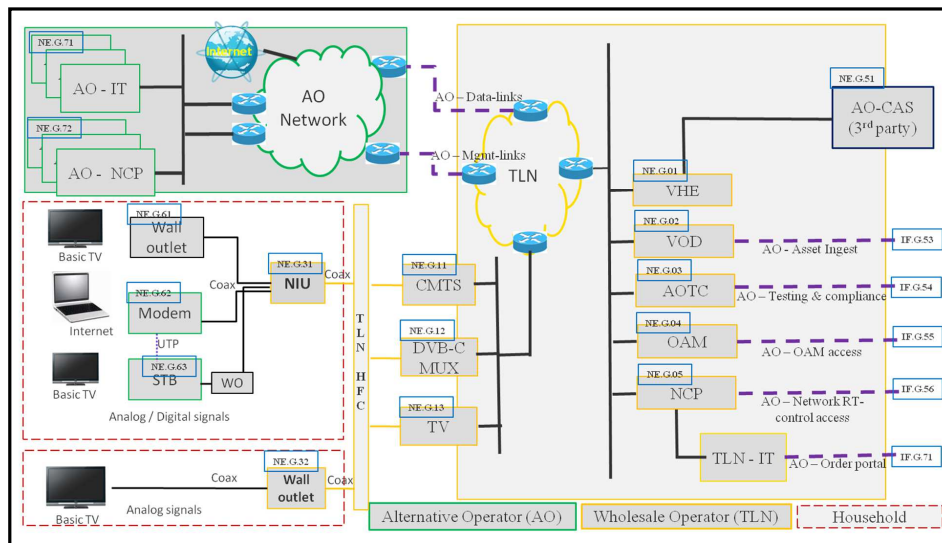
Before conversion to PDF format for publication of the document, the information will be made unreadable by converting the background of the text box to black.

1 Abstract

This document describes the operational management by the AO of the CPE equipment deployed with its customers.

## 2 AO Device management Functional Description

- (1) Overall management access by AO to its devices is provided by a SNMP management. The possibilities and restrictions of this SNMP management are described in this document. The concept of SNMP management is provided as direct access by AO on the AO CPE device would impose un-manageable security risks on the TLN network as the devices are accessing a shared MAC layer.
- (2) Device management as described here relates to management of the “modem” or “Docsis” component of the AO CPE device that provides the connectivity and transport service on the Docsis layer towards the TLN CMTS over the TLN HFC network.
- (3) SNMP based management will be provided to the AO. The AO has full access to the vendor specific MIB tree of their CPE device (i.e. router mgmt, WiFi mgmt, etc) but only a read-only view on the Docsis part (e.g. read view on RF quality parameters, speed parameters, etc).
- (4) Because Telenet and AO cable modems use the same IP subnets, a firewall will be installed to restrict the AO’s access to only cable modems of its own customers.
- (5) Further details can be found in APP\_G\_S\_PAAB\_A \_ Specification Device Management Detail
- (6) In the general architecture picture below the interface is shown over the AO - OAM Access interface.



2-1: Management Overview

### 3 “In band” management access to AO devices

- (7) The SNMP management provides a direct “in band” management access by AO to its devices for the “non Docsis” or “non-modem” part of the AO CPE. With “non Docsis” or “non-modem” part is meant e.g. a WIFI module or integrated IP router module that might be present in the AO CPE.
  
- (8) “In band” management access is provided through SNMPv2. In order to ensure successful interoperability the AO Euro-Docsis CPE device must be conform to the Docsis Operations Support Interface (OSSI) and the MAC and Upper Layer Protocol Interface (MULPI) specification (Euro-Docsis variant) as published in the public Docsis 3.0 specification library on [www.cablelabs.com](http://www.cablelabs.com). The AO Euro-Docsis CPE device must support SNMP-coexistence (RFC 3584) as describe in the Docsis specification and RFC3584.
  
- (9) There will be communities for Telenet and different ones for the AO. For the AO, one community will grant them write access to certain parameters, a second one will allow them to read all the parameters. These SNMP communities must be unique! This is important for the security around the management of the modems.