



Addendum to WBA VDSL2

Improved deployment rules for symmetric VDSL2 profiles

Approved by BIPT on 28/06/2018

Sensitivity: **Unrestricted**

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1. Purpose

The present addendum improves the deployment rules for the WBA VDSL2 symmetric profiles products by extending the effective service coverage of the symmetric zone 2.

2. Dependencies with other addenda

The addendum to WBA “Symmetric Line Profiles” has previously been approved by the BIPT on 23/01/2014.

3. Scope and planning

The purpose of the present addendum is to address the impacts on the WBA VDSL2 reference offer of the improvement of the deployment rules for the WBA VDSL2 symmetric profiles products.

This addendum is applicable to the WBA VDSL2 services with shared and with dedicated VLAN, as described in the WBA VDSL2 reference offer.

The present addendum has been communicated to the BIPT in order to become effective as from **22 October 2018**¹.

4. Prerequisites

The improved deployment rules for symmetrical VDSL2 line profiles requires certain conditions to be fulfilled:

1. The improved deployment rules for symmetrical VDSL2 line profiles are only available on vectored ROPs.
2. Only vector compliant modems (e.g. the NGHGW+, A-Modem and certified OLO-CPEs) will support the new symmetric vectored zone 2 (which is available on all vectored ROPs). All other modems, including vector friendly modems, will synchronize following the deployment rules of the existing symmetric legacy zones or on a fall-back line profile (e.g. the Sagemcom F@ST 3464).

¹ Proximus might postpone this date in order to guarantee the quality of the deliverables

5. Improved deployment rules and line profiles

As from 22/10/2018², Proximus targets to improve the deployment rules for the WBA VDSL2 symmetric profiles products by extending the effective service coverage of the symmetric zone 2.

The changes compared with the current situation are highlighted in green in the following table:

VDSL2 Symmetric Profiles products - profiles (as from 22/10/2018)								
VDSL2 zone identification	Distance [m]	Att. [dB]	Maximum Speeds (bps)		Minimum Speeds (bps)		Description	WBA VDSL2
			Downstream	Upstream	Downstream	Upstream		
Symmetric legacy & vectored zone 1	< 600	< 0,6	14,5 M	6 M	10 M	4 M	Provisioning profile - Symmetric Products zone	LP288
			12 M	4 M	4 M	256 K	Repair profile - Symmetric Products	LP300
Symmetric legacy zone 2	600 < x < 1.000	0,6 < x < 1	7 M	2.2 M	2.2 M	640 k	Provisioning profile - Symmetric Products zone	LP329
Symmetric vectored zone 2 (*)	600 < x < 1.400	0,6 < x < 1,4	7 M	2.2 M	2.2 M	640 k	Provisioning profile - Symmetric Products zone	LP329
Symmetric legacy & vectored zones 1 & 2	< 1.400	< 1,4	9 M	512 K	4,6 M	256 K	Basic Connectivity Profile	LP001
Symmetric vectored zones 1 & 2	< 1.400	< 1,4	7,5 M	512 K	32 K	32 K	Vectoring Fall-Back line profile	LP002

(*) on VDSL2 lines which fulfill the conditions described in the chapter “prerequisites”.

Although engineering design is not entirely finished yet, Proximus can already today reasonably assess that no new line profiles in scope of the present addendum will be added as from 22/10/2018² for VDSL2-lines which fulfill the conditions described in the chapter “Prerequisites”.

6. Ordering and provisioning process

The improved deployment rules for symmetric line profiles do not have any impact on the ordering process, nor on the communication flows during ordering and provisioning of new WBA VDSL2 lines: no new XML, no new action type, and no new fields in the XML messages.

More specifically the communication of the new Vectoring Provisioning Line Profiles will be performed through the XML BGCOUT9, BGCOUT10 & BGCOUT12 messages.

7. Other operational impacts

There is also no impact on usual operations nor on WBA-VDSL2 pricing.

² Proximus might postpone this date in order to guarantee the quality of the deliverables

8. Adaptation on WBA documents

The sections of the WBA offer documents which are impacted by this addendum are indicated in the subsequent paragraphs (changes are highlighted in green). Those adaptations refer to the consolidated version of the WBA VDSL2 reference offer (version 15), published on the Proximus website, at http://www.proximuswholesale.be/en/id_wba_vdsl2/public/access/regulated-services/wba-vdsl-2.html, including the changes introduced with the addendum “Introduction of 552kHz Vectoring on vectored lines” which has been approved by the BIPT on 10/11/2017.

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In section 4.12. “VDSL2 deployment rules”, in paragraph 72, the tables applicable for End-User lines connected to a vectored ROP must be updated as follows :

For VDSL2 End-User lines connected to a vectored ROP with 2,2 MHz Vectoring activated:

Att _{Loop} [dB]	Length _{Loop} [m]	Line Profile name
<0,4	<900	LP040
<0,7	<1.200	LP085
<1	<1.700	LP135
<1,4	<2.300	LP196
<1,6	<2.700	LP225
<0,6	<600	LP275
<0,6	<600	LP288
<1,4	<1.400	LP329

For VDSL2 End-User lines connected to a vectored homogenized ROP with 1,1 MHz Vectoring activated:

Att _{Loop} [dB]	Length _{Loop} [m]	Line Profile name
<0,5	<900	LP040
<0,7	<1.200	LP085
<1,1	<1.800	LP135
<1,4	<2.300	LP172
<1,6	<2.700	LP197
<0,6	<600	LP275
<0,6	<600	LP288
<1,4	<1.400	LP329

For VDSL2 End-User lines connected to a vectored homogenized ROP with 552 kHz Vectoring activated:

Att _{Loop} [dB]	Length _{Loop} [m]	Line Profile name
<0,5	<900	LP040
<0,8	<1.200	LP085
<1,15	<1.900	LP135
<1,4	<2.300	LP160
<1,6	<2.700	LP185
<0,6	<600	LP275
<0,6	<600	LP288
<1,4	<1.400	LP329

In the same section 4.12. “VDSL2 deployment rules”, a new paragraph is added after the current paragraph 73 :

74. The improved deployment rules for symmetrical VDSL2 line profiles up to 1,4dB requires certain conditions to be fulfilled.
- The improved deployment rules for symmetrical VDSL2 line profiles are only available on vectored ROPs.
 - Only vector compliant modems (e.g. the NGHGW+, A-Modem and certified OLO-CPEs) will support the new symmetric vectored zones.. All other modems, including certified vector friendly modems will synchronize following the deployment rules of the existing symmetric legacy zones or on a fall-back line profile when the attenuation is above 1,0dB or the length is above 1.000m. (e.g. the Sagemcom F@ST 3464).

In section 4.14. “Vectoring” paragraph 83 is modified as follows :

83. Vectoring line profiles will be activated on vectored ROPs for VDSL2 End-User lines equipped with a (whitelisted) vector-compliant CPE and fulfilling the deployment rules as defined in the section “VDSL2 deployment rules” of the present document. The lines equipped with a (whitelisted) vector-friendly CPE will keep their active line profile except for the symmetric vectored zones which requires a (whitelisted) vector-compliant CPE. Lines while lines equipped with a CPE which is not at least vector friendly and symmetric VDSL2 lines not equipped with a vector-compliant CPE beyond the deployment rules for the symmetric legacy zone 2 (i.e. with an attenuation between 1,0 and 1,4dB) will keep a fall-back profile/mode (see section ‘Special conditions in connection with Repair’ of the Annex 3 – Planning & Operations of the present WBA VDSL2 offer).

WBA VDSL2, Annex 2: “Technical specifications”

The section 11.1 “Possible modems” is modified as follows :

The modem used by the End-User must be in conformity with the applicable standardization and must be interoperable with the Proximus network. The Beneficiary has two options:

- The Beneficiary can use a standard modem (called Proximus CPE) offered by Proximus. This modem is supported on the Proximus network and may be installed at End-User side in combination with the WBA VDSL2 service. Proximus offers the following types of Proximus CPE:
 - The Sagemcom F@ST 3464 configured by SAGEMCOM for the WBA VDSL2 service. The technical description of this Proximus CPE is detailed in section “Technical Description of the Proximus CPE type Sagemcom”. Proximus has discontinued the delivery of this type of modem.
 - The Next Generation Home Gateway (NGHGW CPE) and the NGHGW+ CPE are intended for use in a one-box configuration. The technical description of this Proximus CPE is detailed in section “Technical description of the Proximus CPE type NGHGW and NGHGW+”.
 - Note that Proximus will no longer sell the current NGHGW once the NGHGW+ CPE is launched.
 - The Access Modem (also called A-modem) intended for use in a two-box configuration. The technical description of this Proximus CPE is detailed in section “Technical description of the Proximus CPE type A-Modem”
- The Beneficiary can use his own modem (called OLO CPE) that will operate in a similar manner as a standard Proximus CPE. In this case, specific Roles and Responsibilities apply. They are described in Annex 7: Roles & Responsibilities throughout the OLO CPE lifecycle.
- Only vector compliant modems (e.g. the NGHGW+, A-Modem and OLO-CPEs) will support the symmetric VDSL2 in the symmetric vectored zones. All other modems, including certified vector friendly modems will synchronize on a fall-back line profile beyond the deployment rules for the symmetric legacy zone 2 (i.e. with an attenuation between 1,0 and 1,4dB). (e.g. Sagemcom F@ST 3464).

WBA VDSL2, Annex 7: “Roles & Responsibilities throughout the OLO CPE lifecycle”

In section 5.2.4 “Spectrum Management (No harm to the network)” a footnote is added :

When an individual line is identified as being a potential disturber in accordance with the criteria set above, Proximus has the right to put this line in a Basic Connectivity Profile, or another specific profile to limit the risk of disturbance. Proximus will inform the OLO of such an action. For situations where a line is considered as potential disturber because it is very unstable, the line can be monitored in Basic Connectivity Profile, and the TBF must be re-launched by the OLO to retest the line. Following the TBF result, necessary repair actions shall be undertaken by OLO (line profile downgrade, physical repair ...). If the line continues to be “very unstable” for 5 working days, even with the Basic Connectivity Profile, the line can be disabled or the OLO shall install a Proximus CPE or another whitelisted OLO CPE to be used instead of (or with) the OLO CPE either in a One Box or a Two box (preferred solution) model. Proximus highly recommends that any OLO CPE is able to operate in a One Box or a Two Box Model.

- (1) Only certified vector compliant OLO-CPEs will support the symmetric VDSL2 in the symmetric vectored zones. All other modems, including certified vector friendly modems will synchronize on a fall-back line profile beyond the deployment rules for the symmetric legacy zone 2. (i.e. with an attenuation between 1,0 and 1,4dB)

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