Body of European Regulators for Electronic Communications

BoR (15) 132

BEREC Report on the Public Consultation on Document "Common Characteristics of Layer 2 Wholesale Access Products in the European Union"

1 October 2015

Table of Contents

1 Introduction ... 3
2 General comments ... 3
3 Suggestions which characteristics L2 WAP should have ... 5
4 Suggestions for further research and improvements ... 7
5 Suggestions for correction and modification of the consultation document ... 8
5.1 Section 1: Introduction and objectives ... 9
5.2 Section 2: Regulatory context ... 9
5.3 Section 3: Prices ... 12
5.4 Section 4.1: Introductory information ... 12
5.5 Section 4.3: Availability ... 13
5.6 Section 4.4: CPE/Modem ... 13
5.7 Section 4.5: Bandwidth ... 14
5.8 Section 4.12: Fault management ... 14
5.9 Section 7: Annex ... 15
6 Abbreviations ... 16

1 Introduction

BEREC published on its website the public consultation on the draft BEREC Report "Common characteristics of layer 2 wholesale access products (hereafter L2 WAP) in the European Union" (hereafter the consultation document) on 8 June 2015. The stakeholders were invited to send their views on the consultation document until 10 July 2015. In total BEREC received 14 contributions from the following stakeholders (in alphabetic order):

- 1&1 Telecom GmbH ("1&1")
- Colt
- ECTA
- Fastweb
- KPN
- Orange
- QSC AG
- TDC
- Tele2 Netherlands B.V.
- Telefonica
- Verizon
- Versatel GmbH
- Vodafone

One contribution is confidential and therefore not listed above.[1]

BEREC welcomes all contributions and thanks all stakeholders for their submissions. The contributions received from stakeholders will be published on the BEREC website unless they are confidential.[2]

This report has the objective to provide an overview of the received contributions and to present BEREC's view on them with regard to the need to change the consultation document (in *italic*). The report is structured according to the following main topics covered by the contributions:

- General Comments
- Suggestions which characteristics L2 WAP should have
- Suggestions for further research and improvements
- Suggestions for correction and modification of the consultation document

The contribution which has to be treated confidential is not described in this report. BEREC will include two clarifications in the consultation document due to this contribution.

2 General comments

This section gives an overview on the general comments received from stakeholders.

<u>ECTA</u>

ECTA welcomes the effort made by BEREC to collect and systematise the regulatory rationale developed by the NRAs which have mandated L2 WAP. ECTA believes that this exercise could help clarify what constitutes good practice on the justification for mandating L2 WAP, on the technical implementation of L2 WAP, and on aspects such as points of hand-over (hereafter

[1] BEREC asked this organisation to submit a non-confidential version of its contribution. However, BEREC received the answer that most parts of the contribution contain technical and specific considerations related to the business of this organization and therefore a non-confidential version was not submitted to BEREC.
[2] See http://berec.europa.eu/

'PoH'). Conversely, ECTA also wish to express its concern that this exercise could cause the spread of bad practice, in particular in terms of NRAs being inappropriate tolerant of inadequate technical specifications (especially on bandwidth, QoS, and number of VLANs), and most critically in terms of wholesale pricing.

With regard to the common characteristics identified, ECTA broadly agree with BEREC's list of nine characteristics and the discussion thereof, but ECTA makes some points (s. section 3).

ECTA also expresses its view that harmonisation of L2 WAP access products is particularly necessary for the provision of wholesale services to other operators and system integrators, and of retail services to business users and that harmonisation is essential for cross border services and competition. ECTA lists several elements which harmonisation has to address.

BEREC welcomes that ECTA values the consultation document. BEREC would like to clarify that the consultation document aims to identify common characteristics of L2 WAP and not being normative or recommend a best practice (p. 3, 4). BEREC would like to stress that it is within the responsibility of NRAs how to use the information. BEREC would like to mention that ETCA informs BEREC on its view regarding harmonisation but does not demand further actions from BEREC.

<u>KPN</u>

KPN expresses concerns that the common characteristics of L2 WAP identified in the consultation document will be used by the NRA's as a kind of checklist to which L2 WAP will have to comply with. Since the nature of the market problems and the competitive situation differs significantly in the various Member States, the remedies should also differ to avoid unnecessary overregulation.

BEREC would like to stress that the consultation document does not aim at being normative or to recommend a best practice (see p. 3, 4). It is the responsibility of each NRA how to use the information of the consultation document.

<u>Telefonica</u>

Telefonica believes that the Report shows the main features of L2 WAP in different countries, but fails to provide a clear comparison between them, given the different characteristics that they exhibit.

The consultation document compares L2 WAP of ten countries based on defined characteristics. For BEREC it is not clear why in the view of Telefonica the consultation document fails to provide a clear comparison between L2 WAP.

<u>Fastweb</u>

Fastweb considers BEREC's initiative of performing an in-depth analysis of L2 WAP in order to identify their common features as a suitable tool to provide NRAs with a harmonised regulatory instrument to be used in the entire European Union. Fastweb shares the overall results of the analysis on the common characteristics.

<u>Orange</u>

Orange appreciates the goal of the consultation document.

TDC

TDC has a general observation regarding the following aspects:

- The consultation document clearly demonstrates that in a number of Member States L2 WAP represent a highly flexible and technology neutral way of providing wholesale access in cases where regulatory access obligations are found justified.
- The consultation document further demonstrates that the successful detailed specification of these L2 WAP should reflect both the given national circumstances in terms of network architecture and technology as well as the market demands.
- The presence of national varieties described in the consultation document should not be misinterpreted as if there is a need for a top-down detailed 'EU specification' of virtual access products.

Tele2 Netherlands

Tele2 expresses its view that the consultation document is very informative on the state of play in various countries. Furthermore Tele2 supports ECTA's comments on the document.

Verizon

Verizon welcomes BEREC's effort to identify the common characteristics of L2 WAP in the EU and the consultation on this subject. As different technical solutions are being adopted in the Member States, harmonization is essential to ensure a Single Digital EU market and further economic growth. Verizon stresses that harmonization of L2 WAP is particularly relevant for the business market.

Versatel

Versatel supports BEREC in all defined common characteristics.

Vodafone

Vodafone expresses its view that as NRAs throughout Europe grapple with the challenges of defining appropriate remedies, BEREC's initiative to look at L2 WAP with local PoH and L2 WAP with regional PoH is welcomed. In the view of Vodafone, L2 WAP is one of the critical remedies that may be necessary to address competition problems in wholesale broadband markets. Furthermore the view of Vodafone is that BEREC's consultation is an important step to investigate the state of L2 WAP in a selected number of countries and that Vodafone broadly agrees with the common characteristics identified by BEREC.

Vodafone also expresses its view that within the mix of access remedies, active wholesale access services on NGA will play a critical role in the years to come to address significant market power, especially where it is technically and/or economically infeasible to use passive access. Furthermore a greater harmonisation of technical and service characteristics of regulated products is necessary to achieve the ambitions of the Digital Single Market Strategy of a true single market and to enable pan-European operators to offer consistent customer experience for residential and business customers.

BEREC takes note of these comments but does not see a need to change the consultation document.

3 Suggestions which characteristics L2 WAP should have

Several stakeholders express their views on which characteristics L2 WAP should have. This section gives an overview of these suggestions.

1&1

1&1 describes rather in detail their view on the current situation in Germany with regard to L2 WAP. 1&1 expresses its view that the layer 2 bitstream access (L2-BSA) offer of Deutsche Telekom, which is currently subject to a procedure at Bundesnetzagentur[3], does not provide for sufficient flexibility in product design for alternative operators. 1&1 therefore joins BEREC which determined in its consultation document that a wholesale bitstream product must as much as possible provide ANOs with the flexibility of a physically unbundled loop.

Furthermore, 1&1 lists a number of characteristics a local substitution product should have and explains them in detail and also the reasons why they are necessary. 1&1 also explains in which situations traffic classes may be necessary and that this traffic classes should be based on the requirements of the NGA Forum in Germany. Furthermore, 1&1 expresses its view on the minimum quality with regard to Frame Delay, Frame Delay Variation and Frame Loss Ratio for several traffic classes.

ECTA

ECTA expresses its view that BEREC and NRAs should ensure that they do not accept alleged contention as a justification for tiering the wholesale prices of L2 WAP with local handover by speed. Furthermore, NRA should also systematically ensure that sufficient VLANs are available to the access taker (also with regional PoH). ECTA believes that the alternative network operators should always be able to choose between a dedicated and a shared VLAN scenario, have a 1:N multicast VLAN option, and that the possibility to enable 4 VLANs per end-user is the absolute minimum. ETCA further notes that nothing prevents the provision of multiple VLANs and of uncontended bandwidth on L2 WAP with regional PoH. Finally ECTA stresses that L2 WAP with local (or quasi-local) PoH should always enable the maximum speed technically possible and the wholesale price should not be bandwidth-dependent.

ECTA also submitted its established position on unbundling of line activation and repair, i.e. on the possibility for ANOs to use their own personnel or external contractors to perform provisioning and maintenance activities on the SMP operators' networks. ECTA believes that this is entirely applicable to L2 WAP (both local and regional PoH), and ETCA asks BEREC to consider including best practice in this area in its final document.

Finally, ETCA expresses its view that it should be clear that the handover interface at the ANO end user should be plain Ethernet delivered as "wire only" or over a modem. The SMP operator should not impose its own router. In case of "wire only", the ANO should be allowed to use its own modem without having to go through an expensive certification process.

Verizon

Verizon suggests that as a minimum the following elements should be harmonised: (i) technical conditions (jitter, delay, MTU, etc.), (ii) Service Level Agreements (repair terms) (iii) access points (local/regional/national) and (iv) underlying technologies (copper, FTTC, FTTH etc.).

Furthermore, Verizon expresses its view which characteristics L2 WAP should have in detail with regard to all characteristics analysed in the consultation document.

[3] Note that the consultation document refers to the specification of the NGA Forum rather than the reference offer submitted by Deutsche Telekom. However, the consultation document will be updated and a first decision of BNetzA on 17 August 2015 and the draft reference offer of DTAG will be included in the analysis. The final decision of BNetzA is expected by the end of 2015. After that, the national consultation and the European consolidation procedures will start.

Versatel

Versatel expresses in detail its view on the regulatory influences for L2 WAP in Germany, its consequences for L2 WAP in Germany and the minimum standards of a German L2 WAP. The minimum standards of a German L2 WAP should encompass the following:

- A L2 WAP has to guarantee far-reaching product design majesty.
- Allocations of VLANs should be fixed to an end customer.
- The current MTU size is too small.
- Quality of service is needed.

Furthermore, Versatel demands that any L2 WAP used by the NRA as a remedy have to be provided with at least the minimum standards which BEREC suggested in its consultation document which are the characteristics 1 to 9 (including 5 and 7).

Vodafone

Vodafone expresses its view on which characteristics L2 WAP should have. A L2 WAP should enable operators to control and deliver the best possible customer experience and build innovative new services. A L2 WAP with a local PoH should give access seekers the same level of control and flexibility that LLU offers. Mimicking the benefits of physical unbundling, including the economics, should remain the guiding principle for the technical design and pricing structure of L2 WAP. Vodafone also lists the most important characteristics of L2 WAP from a commercial stand point in order to foster competition. Furthermore L2 WAP should be provided on an equivalence of inputs basis and complemented by a robust set of SLAs and SLGs meeting users' needs. Pricing should enable economic replicability and where there is limited scope for competing investment in infrastructure, the preference is for L2 WAP to be cost oriented whilst ensuring full economical replicability based on effective retail prices.

BEREC would like to clarify that the consultation document aims to identify common characteristics of current L2 WAP and not being normative or recommend a best practice (see p. 3, 4). Therefore, it does not aim to define which characteristics a L2 WAP must or should have. However, according to the draft BEREC Work Program 2016 BEREC plans to develop the work on the topic L2 WAP in a Common Position next year.

4 Suggestions for further research and improvements

Several stakeholders made in their contributions suggestions for future research and improvements. This section gives an overview of these comments.

Colt

Colt proposes a tenth criterion for L2 WAP across Europe: the Virtual LAN (VLAN) stacking feature. Colt expresses its view that it is a key feature, especially for the wholesale market and explains also why this is the case.

ECTA

ECTA believes that a more detailed examination of VLAN availability, provisioning, modification, de-activation, and the related processes (degree of automation), costs and wholesale pricing as well as of multicast including demand and pricing are an important area for further research, and for improvement.

Tele2 Netherlands

Tele2 also suggests including in the analysis a new development of the L2 WAP of the incumbent operator in the Netherlands which is the so-called WBA/VULA Do-It-Yourself engineering process. This process enables access seekers to carry out most of the service and provisioning related activities in the (above ground) passive infrastructure domain of the copper network itself. However, it cannot be used for solving any problems in the active infrastructure of KPN (such as DSLAMs).

Verizon

Verizon strongly recommends that BEREC continues its work on the topic L2 WAP. The publication of a BEREC common position on best practices for L2 WAP in the EU would be a welcomed next step.

Vodafone

Vodafone would like to urge BEREC to go beyond a mere benchmarking of technical characteristics and instead issue a Best Practices Document to foster harmonisation and guide NRAs in the development and improvement of L2 WAP. BEREC should develop more specific guidance and some important dimensions, such as Service Level Agreements and Guarantees (SLAs and SLGs), B2B interfaces and portal as well as pricing should be covered. In the view of Vodafone there is significant scope for improvement in regulated L2 WAP across Europe. Vodafone provides examples of issues faced by Vodafone in tables in its contribution.

Drawing on their commercial needs, Vodafone has defined a set of requirements for L2 WAP to inform the debate and has submitted this document to BEREC and lists these requirements also together with the rationale in tables. Vodafone believes that those requirements provide a solid foundation to ensure that L2 WAP enables access seekers to compete effectively, give them control and allows them to differentiate and innovate.

BEREC acknowledges that different operators may have a different view which characteristics should be taken into account. However, the consultation document aims to focus on characteristics of L2 WAP with a broad consensus that these characteristics are relevant. Therefore, BEREC suggests not including any further characteristic in the analysis.

BEREC would like to clarify that the consultation document aims to identify common characteristics of L2 WAP and not being normative or recommend a best practice (p. 3, 4). Therefore, BEREC will not include best practices in the consultation document. However, according to the draft BEREC Work Program 2016 BEREC plans to develop the work on the topic L2 WAP in a Common Position next year.

5 Suggestions for correction and modification of the consultation document

Several stakeholders suggest to correct the data presented and to modify statements made in the consultation document. This section gives an overview on these comments.

KPN has several comments on characteristics of the L2 WAP in the Netherlands. KPN seems to refer to already existing (regulated or voluntarily offered) wholesale products. The consultation document, however, only describes the characteristics of the L2 WAP as required by the draft decision of the NRA which is not yet implemented. BEREC will make this clearer in the consultation document.

QSC has several comments which refer to the L2 WAP of Deutsche Telekom which is currently subject to a procedure before the NRA. Since the specification of this L2 WAP was only made

public recently, the draft report refers to the characteristics of the L2 WAP as specified by the NGA Forum. However BEREC will update the draft report based on the status of the standard offer proceedings of the NRA as of August 2015.

5.1 Section 1: Introduction and objectives

QSC AG

QSC points out that the consultation document classifies L2 WAP with local PoH as VULA and L2 WAP with PoH at higher levels of the network hierarchy (e.g. regional) as bitstream. QSC recommends to distinguish more strongly between VULA and bitstream not only by way of PoHs, but by taking product characteristics into account.

BEREC would like to clarify that the consultation document does not aim to define VULA or bitstream but instead aims to identify common characteristics of L2 WAP with local PoH and also of L2 WAP with regional PoH irrespective whether a L2 WAP is seen as VULA or as bitstream. The consultation document will be modified to make this clearer. BEREC examined the possibility to distinguish the L2 WAP whether they aim

- *to be the closest alternative to physical unbundling or*
- *to be used as a typical bitstream service (e.g. as an alternative to layer 3 bitstream service)*

However, it turned out that not in all countries analysed the L2 WAP can be unambiguously assigned to one of those two categories. Therefore, BEREC decided to group the L2 WAP for the purpose of the analysis in the consultation document according to the level of the network hierarchy of the PoH and not into VULA and bitstream.

5.2 Section 2: Regulatory context

Colt

Colt stresses that L2 WAP must be considered as a Plan B only after every regulatory measure to enforce (actual) physical access have failed on copper and/or on fibre and also explains the reasons for that. L2 WAP are active products and as a consequence, the improvement of the features of such products rely on the time frame of regulatory debates and decisions which can be rather long. Furthermore, physical access enables alternative operators to bring innovation in the competition dynamics. Colt expresses its view that from the economic point of view, L2 WAP for data access is not better (and not worse) than Wholesale Line Rental (WLR) for voice access.

Colt informs that the primary focus of Colt is no longer on L2 WAP, but Software Defined Networks (SDN). Colt has already deployed several SDN features during the last 18 months and more are to come in the coming year for their customers – however only on their own footprint and on our (actual) ULL footprint. Colt commits to contribute as much as needed to help regulatory bodies to decide the necessary interoperability measures to enable SDN to work on third party networks.

BEREC would like to clarify that the consultation document aims at identifying common characteristics of L2 WAP and not at being normative or recommend a best practice (p. 3, 4). The consultation document describes the reasons why NRAs have imposed L2 WAP on SMP operators. However due the aforementioned objective the consultations document does not contain any statement when L2 WAP should be used by NRAs.

ECTA

ECTA asks BEREC to revise the following text of the consultation document

> "L2 WAP with local PoH in the countries analysed are imposed where physical unbundling (LLU/SLU) is no longer technically possible or economically viable due to the NGA rollout by the incumbent operator"

to ensure that the final document in no way indirectly suggests that physical access would be impossible, becoming less relevant, or would become less relevant in the future. ECTA explains the technical (multi-operator vectoring, multi-wavelength NG-PON2 (ITU-T G.989.2)) and economic perspective of its view.

The consultation document summarises the reasons why NRAs have imposed L2 WAP. BEREC acknowledges however, that the wording used in this context may be misleading. The consultation document (executive summary, sections 2, 4.3 and 5.1) therefore will be modified accordingly.

ECTA also would like to insist on the critical importance of the availability of both physical access and L2 WAP, and indeed also on the parallel availability of L2 WAP with local PoH and L2 WAP with regional PoH. Moreover ECTA asks BEREC to go one step further, and articulate fully explicitly in its final document that a L2 WAP product with regional PoH cannot be positioned as a substitute for physical access, and hence cannot be included in a market corresponding to Market 3a of the 2014 EC Recommendation on relevant markets. ECTA also provides tables on physical access vs. active access in the EU.

BEREC would like to clarify that the consultation document aims to identify common characteristics of L2 WAP and not being normative or recommend a best practice (p. 3, 4). It also does not aim to evaluate the actual need or appropriateness to impose such a product and on which market it should be imposed. Therefore, BEREC does not see a need to change the consultation document as suggested by ECTA.

Fastweb

Fastweb would like to draw BEREC's attention on two preliminary points of the consultation document concerning the "similarity" between L2 WAP and physical unbundling and the incompatibility between the latter and the introduction of vectoring in case of FTTC/B network.

Considering the first point, Fastweb acknowledges BEREC's effort to clarify that, although similar, the flexibility and potential to differentiate the products is restricted with L2 wholesale access products as compared to physical unbundling, placing, hence, the first one on a lower rung in the ladder of investment as the latter. In Fastweb's view, this limitation in differentiating the products, as well as other features disclosed further, is the proof that L2 WAP should not and cannot be considered as a suitable alternative to physical unbundling.

Considering the second point, Fastweb invites BEREC to reconsider the concept reported in the text of the necessity to "impose L2 WAP where physical unbundling (LLU/SLU) is no longer technically possible or economical viable to the NGA rollout by the incumbent operator", as this would indirectly imply that physical unbundling will become impossible or less relevant in the future. BEREC claims that one of the reasons of this "technological impossibility of physical unbundling" is the introduction of the vectoring technology in case of FTTC/B. According to Fastweb experience, this does not reflect the reality as the equipment manufacturers are introducing a new feature in vectoring technology, named "multi-operator vectoring", which make vectoring compatible with physical unbundling.

Therefore, Fastweb warmly invite BEREC to stress more in the report the differences of the two products by underlining that they should not be considered as alternative products but, instead, as complementary ones. Fastweb also invites BEREC to reconsider the inconsistency

between physical unbundling and vectoring in the light of the incoming progress of the technology and of the approach of some NRAs. Fastweb also provides a detailed explanation of why in their view the above mentioned points have been proven not totally correct and why they may become dangerous for competition.

The consultation document explains why L2 WAP are used in the countries analysed and it does not contain any statement whether L2 WAP with local PoH and physical unbundling can be seen as equivalent or not. BEREC will not include such a statement because it would not be in line with the objective of the consultation document.

BEREC acknowledges that the wording used in the consultation document for the description of the reasons why NRAs have impose L2 WAP on SMP operators may be misleading (see BEREC's response to the comments of ECTA in this section above) and will change the consultation document accordingly.

KPN

KPN points out that BEREC considers 'Market 3a' and 'Market 3b' of the Recommendation on relevant markets 2014 to be 'correspondent' markets to 'Market 4' and 'Market 5' of the Recommendation on relevant markets 2007, and stresses that the description of Market 3a and Market 3b have not been changed without cause and provide some information on the changes made.

BEREC does not see any contradiction between the views of BEREC and KPN because 'correspondent' markets does not mean that the markets are the same and leaves room for differences.

KPN expresses the view that the main reason for imposing layer 2 access obligations seems to be to mimic as much as possible the historical copper based remedy of physical unbundling in terms of flexibility and product differentiation and that an analysis of the actual need for most of the technical features of L2 WAP in the downstream retail markets is missing.

BEREC would like to clarify that section 2 of the consultation document provides reasons why L2 WAP have been imposed in the countries analysed. In case physical unbundling is no longer considered to be viable an alternative to physical unbundling is needed. Therefore, it is understandable that the product characteristics of L2 WAP which aim to be the closest alternative to physical unbundling are oriented on LLU/SLU.

QSC AG

QCS provides rather detailed information on the current regulatory situation in Germany including the information that the NGA forum in which operators and BNetzA worked together specified L2 WAP. However the incumbent operator has chosen to base its current – not yet operational – L2 WAP offer on a completely different specification. For QSC it is therefore important that the consultation document distinguishes between the specifications of the NGA forum and possible regulated L2WAP products.

QSC explains in detail why layer 2 bitstream (regional PoH) cannot be accepted as adequate substitute for physical unbundling. It expresses the view that BEREC agrees in the consultation document, that the adequate substitute product for unbundled lines – if there has to be any – can only be found in the same market (Market 3a) and would appreciate a strong and clear statement from BEREC in the consultation document.

The consultation document describes the reasons why the countries analysed have imposed a L2 WAP on the SMP operator. However, it does not aim to assess whether a certain L2 WAP can be accepted as adequate substitute for physical unbundling.

Tele2 Netherlands

Tele2 points out that the text in the consultation document on page 6 states quite well that establishment of a L2 WAP is a challenging and complex process. Tele2 suggests that the text better reflects that the experience of operators and regulators across the EU, so far, has been that this only happens under the pressure of regulation. Furthermore Tele2 suggests that this conclusion should also be reflected in the management summary.

In the view of BEREC it should be clear for the reader of the consultation document that it analysis L2 WAP imposed by NRA on SMP operators (see section 1 and 2, tables 1 and 2 in the annex, line "Regulatory context") and that there was a need for regulatory intervention. Therefore, BEREC does not see any need to change the consultation document.

Telefonica

Telefonica points out that the statement made on page 5 in the consultation document "In France and Spain, the L2 WAP is imposed on Market 5 and have regional (but no local) PoH" could be misleading. In the view of Telefonica it appears that the service available in both countries is equivalent, but in France it does not include fibre accesses and in Spain it does.

BEREC would like to clarify that in section 2 the regulatory context is described and therefore primarily the market on which the L2 WAP is imposed and also whether it has a local or regional/national PoH. The NGA architecture (FTTB/C/H) on which the L2 WAP is available is described in section 4.3 and this section, as Telefonica pointed out in its comments, clearly describes that the L2 WAP of France is based on copper and the L2 WAP of Spain on copper and fibre. Therefore, BEREC does not see any need to change the consultation document.

Telefonica also provides figures for the use of the NEBA access (30/06/2015): 98.725 FTTH and 18.197 Cu.

BEREC will update the consultation document (section 2 and annex, table 16) accordingly.

5.3 Section 3: Prices

Orange

Orange proposes to change the text regarding the prices of the L2 WAP in Belgium as the price of the L2 WAP also depends on different QoS classes.

BEREC will add this information in the consultation document.

Telefonica

Telefonica refers to the following paragraph of the consultation document (p. 7): "One should also keep in mind that the bandwidths depicted in Figure 1 may be based on different underlying infrastructures: downstream bandwidths of 100 Mbps or more are always based on FTTH. Downstream bandwidths below 100 Mbps are always based on FTTC with the exceptions of Austria and the United Kingdom, where those bandwidths are also available based on FTTH." Telefonica suggests including Spain as an further exception because NEBA has also downstream bandwidths below 100 Mbps.

BEREC would like to clarify that the paragraph mentioned by Telefonica is related to Figure 1 which shows the monthly fees of L2 WAP with local, not with regional PoH. Since NEBA of Telefonica analysed in the consultation document has regional PoH there is no need to change the paragraph mentioned by Telefonica.

5.4 Section 4.1: Introductory information

KPN

In the consultation document it is stated that “in the Netherlands, the L2 WAP will be available at the same location as physical unbundling at a part of the CO locations due to the expected closure of a large part of the COs in the long term” (p. 11). KPN informs that the L2 WAP (VULA) offer will however be available at the metro core level, which is a logically different level that geographically may or may not coincide with the geographical location for physical unbundling (MDF) at the local level.

BEREC will make this point clearer in the consultation document in order to avoid misunderstandings.

QSC AG

In the consultation document it is mentioned that “if in practice the quality is sufficient from ANO’s point of view e.g. with uncontended or ostensibly uncontended bandwidth, it might not be necessary to explicitly define QoS” (p. 10). With regard to this QSC expresses the view that in cases where the L2WAP is not implemented yet it is strictly necessary to define the QoS of the L2 WAP because of the absence of practical experiences.

BEREC does not see any contradiction between the consultation document and the view expressed by QSC.

5.5 Section 4.3: Availability

Orange

Orange proposes to change the text regarding the availability of the L2 WAP in Spain. According to Orange the L2 WAP in Spain is available only for approximately 85% of copper access lines.

BEREC will add this information in the consultation document.

QSC AG

QSC expresses the view that BEREC states that in Germany L2 WAP will only be available where physical unbundling is no longer technical possible and that the actual situation is slightly different to that. QSC provides further information on that.

BEREC does not agree with the view of QSC because the information in the consultation document is that in Germany “L2 WAP will be available at least in NGA areas where physical unbundling is no longer technically possible or economically viable due to the NGA rollout by the incumbent operator” (p. 12, section 4.3) Therefore, the consultation document is not in a contradiction to the information provided by QSC on the actual situation in Germany.

5.6 Section 4.4: CPE/Modem

Fastweb

Fastweb considers essential to give to alternative operators the possibility to select, install and manage their own customer premises equipment in order to be able to offer their end-users (residential, business and wholesale customers) seamless solution. Fastweb, therefore, asks BEREC to specify more clearly this point in the document.

BEREC would like to clarify that the consultation document (sections 4.4 and 5.1) already analyses whether the L2 WAP analysed enable ANOs to use and configure their own CPE/modem and the requirements the CPE/modem have to fulfil. Furthermore the consultation document aims to identify common characteristics of L2 WAP and not at being normative or recommend a best practice (p. 3, 4). Therefore, in the consultation document BEREC will not make any statement which characteristics L2 WAP should have.

Orange

Orange informs that in France, the ANOs test the CPE/modem and in Spain, it is no longer necessary that the vendor of the ONT has to be the same as the vendor of the OLT and suggests changing the text.

BEREC will update the consultation document accordingly.

Telefonica

Telefonica refers to the following sentence in the consultation document (p. 12): “In Spain, due to compatibility restrictions, the vendor must currently be the same for both the CPE/ONT and the OLT in the network of the incumbent (this is currently in revision).” Telefonica informs that in Spain there are already interoperable ONTs. The restriction that the ONT and the OLT must belong to the same manufacturer does no longer apply.

BEREC will update the consultation document accordingly.

5.7 Section 4.5: Bandwidth

Orange

Orange informs that in France, SDSL goes up to 8 Mbit/s for ATM and 16 Mbit/s for Ethernet and suggests to change the text in the consultation document (p. 13) as follows: “In Belgium, symmetric bandwidth is available based on SDSL (not NGA) with several profiles up to 2.3 Mbps. In France symmetric bandwidth is available based on SDSL (8 Mbits/s for ATM, 16 Mbit/s for Ethernet)”

BEREC will update the consultation document accordingly with the data for Ethernet. However, BEREC would like to clarify that the L2 WAP of France included in the analysis of the consultation document is the “DSL access and Collect Ethernet” of Orange (not an ATM based L2 WAP). Therefore, the data for ATM is not relevant for the consultation document.

5.8 Section 4.12: Fault management

Fastweb

Fastweb stresses that the consultation document underlines that in five countries - including Italy - the L2 WAP support the fault management of ANOs at the DSLAM level with the possibility for the latter to receive actual values of parameters of the subscriber access line on request. However on the basis of Fastweb’s experience, this remote-access line diagnostic system provided today by Telecom Italia is not working properly because (i) the set of parameters made available is rather limited, (ii) ANOs cannot configure the DSLAM and (iii) ANOs can query the system only per access line and not on a larger scale.

BEREC would like to clarify that the consultation document does not say that remote-access line diagnostic system provided by Telecom Italia enables ANOs to configure the DSLAM or enables to query this system on a larger scale. Therefore, in the view of BEREC there is no need to change the consultation document.

Telefonica

Telefonica refers to the following sentence in the consultation document (p. 16): “In five countries (AT, BE, DK, DE, IT), the L2 WAP supports the fault management of ANOs (at the DSLAM level) with the possibility for ANOs to receive actual values of parameters of the subscriber access line on request (see table 15 and table 16).” Telefonica informs that it could be added that, in Spain, the telediagnosis tool is currently under development, although there is still no date of availability.

BEREC will include this information in the consultation document.

5.9 Section 7: Annex

COLT

Colt has collected data across Europe to present its own inputs regarding the nine criteria defined by BEREC. Colt points out that the data collection of Colt matches with most of the data published in the draft BEREC report.

BEREC appreciates the data provided by Colt and would like to clarify that the data matches with the data of the consultation document except in the two following cases.

- *According to the consultation document in Belgium the L2 WAP of the incumbent is also available with local PoH. According to the data of Colt this is not the case.*
- *According to the consultation document in Denmark the L2 WAP of the incumbent (VULA) provides uncontended bandwidth with local PoH.[4] According to the data of Colt this is not the case.*

BEREC would like to clarify that in Belgium the L2 WAP with local PoH of the incumbent is already technically available however the NRA is still working on the price of this product. The consultation document will be modified to make this clearer. BEREC would like to stress that in Denmark the L2 WAP of the incumbent is available with a PoH directly at the DSLAM in the CO or in the street cabinet. In the latter case the ANO further can require a dedicated fiber from the street cabinet to the CO, resulting in uncontended access to the DSLAM in street cabinet at the CO.[5]

BEREC would like to clarify that the following products are not included in the analysis of the consultation document and therefore the data provided by Colt for these products is not in contradiction with the consultation document.

- *L3 WAP with local PoH of the Italian incumbent,*
- *L3 WAP with regional/national PoH of the Italian incumbent*
- *L2 WAP with regional/national PoH of the incumbent in the Netherlands and*
- *L2 WAP with regional/national PoH of BT Wholesale.*

ECTA

In the view of ECTA the tables at pages 24-25 of the consultation document, combined with the graphic on page 8, provide conclusive proof that, in several cases, wholesale prices for L2 WAP are disconnected from the charges for wholesale physical access/unbundling, and are disconnected from underlying costs by introducing speed tiering. This should be a warning signal for all NRAs and for BEREC to the effect that any stepping away from physical access, or inappropriate tolerant NRA decisions on the characteristics and wholesale pricing of L2 WAP, is likely to enable SMP operators to structure the downstream markets to their advantage, by setting their preferred wholesale bandwidth-related charges.

BEREC would like to clarify that the objective of the consultation document is to analyse the characteristics of L2 WAP and to identify common characteristics of L2 WAP with a focus on the technical characteristics and not to analyse to which extent the pricing used by the NRAs is appropriate.

Orange

[4] VULA of TDC is also available with a dedicated fibre between the backside of the DSLAM and the PoH at the CO/MDF. In this case the bandwidth is uncontended.
[5] See consultation document, p. 31, footnote 77.

Orange proposes the following changes in table 7 line “Symmetric bandwidth” (p. 29) reflecting the situation in France (see also the comments of Orange in section 5.7): “The offers are 8 Mbit/s for ATM and 16 Mbit/s for Ethernet backhaul both for Business offers”.

BEREC’s response to that is the same as to the comments of Orange in section 5.7.

Orange also informs with regard to table 9 line “Bandwidth based on over booking” (p. 31) that Ethernet is uncontended and with no overbooking and that the mentioned information are only related to ATM. Therefore Orange proposes the following:

Uncontended bandwidth	No for ATM, Yes for Ethernet
Bandwidth based on over booking	Yes for ATM, No for Ethernet

BEREC will update the consultation document accordingly.

6 Abbreviations

ATM	Asynchronous Transfer Mode
CO	Central Office
ECTA	European Competitive Telecommunications Association
FTTB	Fibre To The Building
FTTC	Fibre To The Cabinet
FTTH	Fibre To The Home
L2 WAP	Layer 2 Wholesale Access Products
LAN	Local Area Network
NRA	National Regulatory Authority
PoH	Point of Handover
SLA	Service Level Agreement
SLG	Service Level Guarantee
ULL	Unbundled Local Loop
VLAN	Virtual LAN
VULA	Virtual Unbundled Local Access