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Public Consultation on the Common Characteristics of Layer 2 Wholesale Access Products in the EU

Public contribution of the Versatel GmbH

Dear BEREC-Office,

On 8 June 2015 BEREC announced a public consultation on the common characteristic of Layer 2 Wholesale Access Products (L2 WAP) in the European Union based on a draft document. This consultation claims to have two main objectives: Firstly, it aims for giving an overview of the current situation for L2 WAP in several member states of the European Union. These are some where L2 WAP already is imposed and available such as Austria, Belgium, Denmark, France, Greece, Italy, Spain, United Kingdom. Additionally, the consultation deals with countries where L2 WAP is not imposed, but will be in future such as Germany and the Netherlands. The drafts secondly objective is to identify common characteristics of the L2 WAP of these ten countries.

We would like to take this opportunity to thank you for consulting Versatel. In our statement we will firstly give an overview of the conditions the German telecommunication sector is influenced by (A.). Secondly, we will explain the consequences of the current situation in Germany (B.). This will lead to the next part where we describe the minimum standards the competitors in Germany expect from both the incumbent and the NRA (C.). Finally, we support BEREC in all defined common characteristics. However, at present there is only one product at layer 2, these characteristics 1 to 9 shall be binding included characteristics 5 and 7. This product has to be available at BGN locations as well as MSAN locations. The prices shall be developed depending on these locations (D.).

A. Regulatory influences for L2 WAP in Germany

L2 WAP in Germany is influenced by several circumstances. The German NRA Bundesnetzagentur (BNetzA) disposed bitstream access at layer 2 in case of using vectoring as a substitution for competitors replaced from their claims to access the local loop unbundled. This bitstream access at layer 2 has to be provided the latest from January 1st of 2016.

On October 9th of 2014 the European Commission published its new Recommendation on relevant markets in the telecommunication sector. It continues the 2007 Recommendation as there already were two relevant markets L2 WAP could launch. The market 4 was defined as *local loop unbundling* and market 5 was recommended as *wholesale broadband access*. In 2014 those two markets now are named market 3a *wholesale local access* and market 3b *wholesale central access for massmarket products*. Both Recommendations have in common, they separate between local points of handover (PoH) and L2 WAP with PoH at higher levels of the network hierarchy.

Based on this new Recommendation 2014 BNetzA took her definition and analysis of the two markets 3a and 3b. The first study draft dealing with market 3b was published in November 2014. The document defines two relevant product markets included as wholesale central access provided at a fixed location for massmarket products, called bitstream access at layer 3 and bitstream access at layer 2. BNetzA decided there was a possibly situation of competition in 20 regions under the condition layer 2 bitstream access will be provided. In these regions the Telekom Deutschland regulatory administrative acts concerning bitstream access at layer 3 could be cancelled. Then, in spring 2015 BNetzA released her market definition and analysis in market 3a, where a virtual unbundled local access was described as a remedy for local loop access.

Due to these changes there are two very important formal administrative procedures running. The first one is referring to a regulatory order concerning market 3b. One point of regulation is the revocation of regulatory orders for layer 3 bitstream access for the regional markets under the condition Telekom is providing a reference offer for bitstream access at layer 2. The second procedure is dealing with this required reference offer for a layer 2 bitstream access (L2-BSA). This reference offer is currently intended by Telekom Deutschland to be the only L2 WAP in Germany. There is no expected declaration for which market - *wholesale local access* or *wholesale central access for massmarket products* - this product should be available. We assume currently there is only one product offered by Telekom Deutschland, which is not sufficient for the high requirements.

B. Consequences for L2 WAP in Germany

In relation to the above mentioned objectives L2 WAP is supposed to be introduced on both markets 3a and 3b the same time. Telekom seems set to approve the L2-BSA as a product available on broadband network gateways (BNG), nearly about 900. These BNG are currently used as PoH at higher levels of the network hierarchy. This might lead to conclusion that the German L2-BSA is a market 3b assigned product. On the other hand even BNetzA is discussing this product as the obligated substitute for the local loop unbundled which remains to market 3a. Furthermore, we recognise this reference offer as the only one.

The consequence is that there is no clearly separation in Germany between L2 WAP with local PoH and those who are central or higher. The results are significant effects on the German telecommunication sector. Firstly, the currently reference offer has several lacks of quality requirements and balances which we summarise below. Secondly, even though it was only situated on market 3b the L2-BSA reference offer is not able to be considered as a wholesale product at layer 2, because BEREC already decided all L2 WAP are based on Ethernet and end users have to be identified by ANOs. Both of these requirements are not possible to fulfil especially due to a dynamic allocation of VLANs to end users. Both, the loss of quality and balance and the missing layer 2 conditions indicates more a product at layer 3. Since there is only one product available it is not possible separating it like BEREC did. But, since imperative quality requirements are influenced by the access to multi-service access nodes (MSAN) it has to be equal for access to BNG.

C. Minimum standards of a German L2 WAP

We support the BEREC in all analysed characteristics 1 to 9. However, due to the imperative availability of L2-BSA on the BNG and MSAN even the common characteristics 5 and 7 have to be included. However, there are some imperative and mandatory requirements:

Product Design Majesty

All competitors claim that a L2 WAP has to guarantee far-reaching product design majesty. Since loop unbundling is giving competitors the possibility to create products, virtual unbundling must give that freedom too. That means the competitor and consumer at wholesale level must have the possibility to form his own end customer products. This includes there should be no rule concerning to L2 WAP Telekom is dictating by circumstance originally situated in her own risk area and responsibility. All telecom consumers should have the ability to develop, create and form a multitude of end customer

products based on L2 WAP. That means they should be able without overbooking restrictions for both, the MSAN and the BGN. Customers demand is defining the wholesale product, not the incumbent.

Allocation of VLANs should be fixed to an end customer

Telekom currently intends the allocation of VLANs dynamically. That means for each dial-in the end customer is served with a new VLAN. This leads to the result that with every dial-in again their customer profile has to be set up. We support the BERECS analysis that ANOs need to be able to identify their customers in order to ensure individual services to them. This leads to several requirements which have to be fulfilled. Firstly, it is necessary for providing the L2 WAP Ethernet connection. Secondly, customers can be authorised individually for any specific network resource or service the ANO is offering. For example, this authorisation means the signed up bandwidth by the customer. Thirdly, identifying a customer ensures to monitor the network connection.

In Germany customer identification in the current L2 WAP negotiations is not provided by the German Telekom. Regarding to the presently administrative procedure of the reference offer the incumbent does not want to provide any customer identification service but a dynamic assignment of VLAN every dial-in. The consequence is that wholesale consumers will have to use Point-to-Point-Protocol (PPP) for identifying their end customers. PPP is an additional header each traffic package will have to use. The consequence is that the maximum transmission unit will be minimised because of this header. Moreover, PPP is not compatible with Ethernet which is a necessary common characteristic of L2 WAP.

Current size of MTU is too small

Telekom is intending to provide the L2-BSA with a maximum transmission unit rated at 1500 Bytes. Competitors demand the Telekom to provide at least 1600 Bytes. A larger MTU brings greater efficiency because each network packet carries more user data while protocol overheads, such as headers or underlying per-packet delays, remain fixed. The resulting higher efficiency means an improvement in bulk protocol throughput. A larger MTU also means processing of fewer packets for the same amount of data. In some systems, per-packet-processing can be a critical performance limitation.

Telekom argues the size of MTU has to be standard since some DSLAMs connect only with 1500 Bytes. Competitors usually need larger sizes because of IPv6 is replacing IPv4. A few internet services still run with IPv4, so the address has to be translated. This functions by taking a header

which is carrying the IPv6 address. Customers suffer restrictions because they are not able to translate IP addresses easily. The result is the traffic data in network packages becomes smaller. This leads to higher amount of package with higher loss possibility.

Quality of service is needed

Since L2 WAP is discussed as a substitute for the unbundled loop, there have to be the same standards for a defined quality of service. This is because of ANOs are free to create and form the quality of their services in case of physical unbundling. We support BEREC in judging L2 WAP should provide at least a defined QoS with a sufficient high quality level. Due to the situation in Germany where Telekom only provides one L2 WAP this has to be provided with an obligatory QoS and several VLANs per end user for BGN and MSAN.

A furthermore outcome is Telekom does not want to supply any traffic management. For this competitors need to have binding flow control parameters concerning to *frame delay*, *frame delay variation* and *frame loss*. A pre-defined traffic prioritization categories and a bindingly traffic limitation system is a must have, since virtual unbundling should not allow any overbooking restrictions. Each traffic prioritization category should have own rules for data flow, limitation and allowed traffic dropping. After all, competitors should be not restricted in creating bandwidth profiles for end customers.

D. Common minimum standards for L2 WAP have to be provided


Since there is one L2 WAP in Germany, this has to fulfil all remedy requirements for both MSAN and BNG. State aims and the vectoring strengthening of MSAN produce the consequence any L2 WAP as a remedy have to be provided with at least the minimum standard which BEREC suggested, which are characteristics 1 to 9 with 5 and 7 included.

Yours faithfully

Versatel GmbH



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