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Comments on BEREC draft guidelines "on Common Approaches to the Identification of the Network Termination Point in different Network Topologies"

A. Introduction

The undersigned associations welcome the opportunity to provide comments to BEREC's *draft guidelines on common approaches to the identification of the network termination point in different network technologies* (BoR (19) 181).Our response addresses what we believe are critical issues with the draft Guidelines, and we believe they should lead to a re-evaluation of the type of document BEREC.

B. Legal basis and the application of relevant articles

The draft Guidelines depart from the scope of the mandate and the legal basis provided by Art. 2 (9) and 61(7) EECC. This is problematic, because this leads to a document that invites NRAs to choose the location of the NTP based on their own judgement instead of identifying it on the legal basis given by the EECC. Only the latter is i.e. BEREC's mandate: to simply identify the NTP's technical location in accordance with the definition of Art. 2(9). We explain this in section II below.

Furthermore, the draft Guidelines drift away from the definition of the NTP in Art. 2(9) in another way. The physical point in the network that is the NTP is identified *"by means of a specific network address"*. However, the draft Guidelines do not follow this strictly but try to overextend this term, resulting in an NTP position not precisely where it is by definition according to the network address, but potentially before or after it. This creates a variability in the NTP that is especially problematic in shared medium networks. We explain this in section III below.

Third, the draft Guidelines propose the competitive state of the TTE market as an important consideration for determining the NTP. Aside the issue that, as already described, identifying the NTP is not a choice but a matter of technological fact, involving the competitive state of the TTE market goes against the principles of competition law and derogates their functioning. It relies on an incorrect reading of Directive 2008/63/EC (TTE Directive) and a misunderstanding of its scope and aim. We explain this in section IV below.

Finally, the draft Guidelines invoke the 'free choice of terminal equipment' requirements in the TSM Regulation to determine the NTP, where the legislation intends to have the NTP determine the scope of application of 'free choice' instead. We explain this in section V below.

I. Scope of the Mandate

BEREC is commissioned to provide guidelines on common approaches to the identification of the network termination point (NTP) in different network topologies.

The interpretation of ‘approach’ BEREC takes is that of a detailed catalogue of criteria to be assessed in each individual case (device). The undersigned do not share this interpretation as the meaning of the term ‘approach’ points to a document containing general thoughts on the matter at hand.

The same applies to the legal meaning of ‘guidance’ or ‘guidelines’ which are neither designed nor allowed to set out legal provisions beyond those provided by the legal basis (i.e. the EECC).

Further, there is a complete lack of consideration of different network topologies. The Document neither assesses which network topologies are available nor which differences they comprise. This is all the more astonishing as several statements by interested parties have been filed in advance to the Document’s creation which deals with the different topologies and their relevant differences in detail.

II. The draft Guidelines are enabling NRAs to ‘choose’ the NTP, instead of helping them to ‘identify’ it

BEREC recognizes that its task is to “provide guidance to NRAs on common approaches to the identification of the network termination point (NTP) in different network topologies”. This is in accordance with the wording of art. 61(7) EECC, which foresees in the issuing of these Guidelines by BEREC.

However, looking at the parameters BEREC advises NRAs to take into account, it seems that BEREC is drifting away from its original tasks. The key parameters proposed by BEREC to ‘identify’ the NTP do not actually help in identifying the NTP as defined by Art. 2(9) EECC. Instead they offer a choice of what the NTP should be, based on alleged (and questionable) regulatory advantages or disadvantages.

The EECC gives a clear definition of the NTP in Art. 2(9):

> *“‘network termination point’ means the physical point at which an end-user is provided with access to a public electronic communications network, and which, in the case of networks involving switching or routing, is identified by means of a specific network address, which may be linked to an end-user’s number or name”* (our underlining)

From the recital 19 EECC, it becomes clear what the relevance of the NTP is:

> *“The network termination point represents a boundary for regulatory purposes between the regulatory framework for electronic communications networks and services and the regulation of telecommunications terminal equipment.”*

In addition, the same recital also makes clear that NRAs have the responsibility to identify “*the location of the network termination point*”.

It is important to note that the recital says that the NTP “*represents a boundary for regulatory purposes*”. This merely indicates the importance of the NTP as a demarcation between public and private network domains—it does not justify an interpretation that allows the boundary to be chosen by NRAs for regulatory purposes.

This means that identifying the NTP should not be a judgement call based on which point best promotes a particular set of parameters chosen by BEREC (or in fact the respective NRA for its national jurisdiction). Instead, what must be done according to Art. 61(7), is to provide guidance to understand the individual elements of the NTP as defined in Art. 2(9) in a harmonized way. In other words: BEREC needs to provide guidance to help identify what "*the physical point"* which "*is identified by means of a specific network address*" is in different network topologies.

This is an exercise in assessing the technological reality. It is not a task in which there is discretionary opportunity to appoint any given location as the NTP, which happens to serve the purpose of the parameters chosen by BEREC (or the NRA, respectively). As a consequence, parameters such as:

- "The impact on the TTE market" (section 3.2)
- "Interoperability between public network and TTE" (section 3.3.1)
- "Simplicity of the operation of the public network" (section 3.3.2)
- "Network security" (section 3.3.3)
- "Data protection" (section 3.3.4)
- "Local traffic" (section 3.3.5)

are not capable of identifying where the NTP is, but are instead arguments where an NTP should have been defined by the EECC to propagate other regulatory aspects. The fact that even in the presence of such argument legislators have laid down the definition in Art. 2 (9) as it is can only lead to the conclusion that the NTP is "*the physical point […] identified by means of a specific network address*" and not a physical point chosen by an NRA.

III. BEREC incorrectly attributes the term 'by means of'

In §18 and §19, the draft Guidelines interpret the term '*by means of*' in Art. 2(9) EECC and broaden it unjustifiably to '*with the help of*'. The wording of Art. 2(9) EECC clearly requires that the NTP has to be '*identified by means of a specific network address'*. It is therefore the network address that determines the NTP without any room for interpretation. By broadening the understanding of the term, the draft Guidelines extend the scope of the NTP to some device near (before or after the point specified by the network address). Especially when assessing the network topology of a point-to-multipoint (P2MP) network, BEREC's interpretation results in a vague, variable location of the NTP.

In P2MP networks, the NTP would – following BEREC's logic – be identified by a device deployed behind the NTP, such as an ONT or cable modem, which would consequently have the status of Telecommunications Terminal Equipment (TTE). The NTP would then be formed by a socket or similar element located where the local loop is entering the end-user's premises.

However, such identifying device can be moved from its location and connected to another socket, without the operator being able to detect such relocation. As the NTP would then be a different one (another socket), it would be in the sole discretion of the end-user to define the relevant NTP – or, in other words, to shift the operator's domain. The operator on the other hand would not know the exact boundaries of his network and thus the reach of his

regulatory duties imposed by relevant legislation. We are convinced this is an incorrect application of Art. 2(9) EECC, which leads to uncertainty for network operators.

From the wording of the article, it follows that the NTP is a tangible location and that this definition aims at describing a definitive and stable boundary between the end-user's domain and that of the operator, and which does not allow the end-user to shift this boundary.

IV. There is no legal basis for involving the competitive state of the TTE Market

In section 3.2, BEREC sets to explore the impact the definition of the NTP has on the so called "TTE" market, particularly in terms of competition and innovation. This contributes to the notion that the draft Guidelines are not providing guidance that will help NRAs identify the NTP based on objective technological realities.

By involving the competitive state of the TTE market, the draft Guidelines implement a non-solicited instrument which enables NRAs to steer market behaviour through analysing the effects of various choices of where the NTP could be put, and basing that choice, amongst other things, on the outcomes of "competition and innovation" for the TTE market. With this, the draft Guidelines use a legal instrument that was never intended by legislators to do so. This type of intervention misappropriates the scope of the TTE Directive, goes well beyond the legal mandate of Art. 61(7) and is incompatible with competition law. In addition, the assumptions made by section 3.2 are incomplete and often incorrect, which we explain in C.III.

In §29 of the draft guidelines, BEREC states that "*Directive 2008/63/EC aims to foster competition in the TTE markets*". BEREC goes on to describe the impact of determining the NTP in various locations, and in §42 draws a conclusion regarding the "*degree that the NTP location fosters innovation and competition on the TTE market*". Here, BEREC obviously has misjudged the intent of the TTE Directive. The Directive is a continued work from Directives originally put in place in the '80s and '90s of the last century, which were put in place specifically to address a key issue within TTE markets which stems from the time that telecommunications were State monopolies:

> *"In all the Member States, telecommunications were, either wholly or partly, a State monopoly generally granted in the form of special or exclusive rights to one or more bodies responsible for providing and operating the network infrastructure and related services. Those rights, however, often used to go beyond the provision of network utilisation services and used to extend to the supply of user terminal equipment for connection to the network."* (Recital 2, TTE Directive)

It is evident from the recitals and articles in the Directive that it is exclusively aimed at removing exclusive rights granted by Member States to undertakings for the provision of terminal equipment.

Of course, the legislator has justified their choice to take these measures, by expressing, inter alia, *"[…] <u>that users must be allowed a free choice between the various types of equipment available</u> if they are to benefit fully from the technological advances made in the sec-*

tor", as BEREC only partially (the underlined) points out in §28. But this does not justify BEREC's approach in section 3.2.

First, it should be evident that the analysis that BEREC makes in section 3.2 regarding the TTE market is related to the state of competition in the TTE market. It is first and foremost the domain of the European Commission and the National Competition Authorities (NCAs) to *ex-post* assess and address the shortcomings in terms of competition and their effects on innovation, on the basis of Art. 101 and 102.

Nothing in the TTE Directive derogates this *ex-post* approach, e.g. by imposing a *lex specialis* type legislation. Hence, there is no basis for BEREC and NRAs to base their decision on NTP location on parameters that are inherent to competition law. To the contrary, by doing so BEREC and NRAs would circumvent existing procedures and their safeguards, contrary to the basic legal principles of the EU.

Secondly, while BEREC quotes a partial sentence regarding '*free choice*' in recital 3 of the TTE Directive and mislabels this as the aim of the Directive, the legislator goes on to clearly explain in recitals 4 and 5 that they only wish to address and remove the existence of exclusive rights granted by Member States by means of this Directive. Therefore, the working of this Directive is strictly contained to this issue. The articles provide no basis for BEREC to isolate this particular partial phrase about free choice from the recitals, and extrapolate that to the universal legal basis to promote competition in the TTE market and to extend the scope of its assessment of the NTP under Art. 2(9) EECC.

Finally, even if the TTE Directive would have provided a basis as claimed by BEREC, the cited section considers a free choice for "users". However, BEREC conflates "users" with "end-users" despite these being separately defined and different concepts in the (at that time relevant) Framework Directive (2002/21/EC). Even in the rationale of BEREC with regards to the meaning of the TTE Directive, the analysis should stop at "user" level, which included operators, and not consider aspects related to "end-users", as the draft Guidelines do in section 3.2.

It is not up to BEREC to replace the legislative bodies' decision. Especially it is not within BEREC's mandate to argue by the aims of the TTE Directive and the impact of NTP definition and the TTE market. The EECC creates a boundary where in the operator's domain there is no 'TTE freedom' at all but in the end-user's domain there is full freedom. It leaves no room to shift this boundary by the mere wish to 'better' foster competition in the TTE market. The undersigned, however, have no intention to shift this boundary, esp. they acknowledge routers to be in the end-user's domain.

V. The draft Guidelines incorrectly refer to net neutrality rules

The draft Guidelines further refer to the interpretation of net neutrality regulations to justify in §25 that "*NRAs should consider whether there is an objective technological necessity for equipment which the end-users are not able to replace with own equipment to be considered as part of the public network when defining the fixed NTP location*".

In doing so, the draft Guidelines reinterpret key definitions in a way that allows NRAs to broaden the end-user's domain and artificially put the demarcation point further up the public

communications network, beyond the actual network technological point. The draft Guidelines use "*the objective technological necessity*", a parameter in the BEREC Open Internet Guidelines that was originally intended to determine whether an ISP justifiably provides *"obligatory equipment"* or whether they are unjustifiably restricting the free choice.

The draft Guidelines incorrectly use "*the objective technological necessity"* as a way to actively increase the domain of which network equipment is a TTE by using this parameter to choose where the NTP should be. Regulation (EU) 2015/2120 (the TSM Regulation), which the BEREC Open Internet Guidelines interpret, never intended to extend or broaden the end-user's domain in order to make more terminal equipment fall under the 'free choice' requirements. Instead it aims to safeguard that free choice within the existing domain only.

Therefore, the correct identification of the NTP will help determine which equipment in the private domain of the end-user is subject to *'free choice'.* However, the draft Guidelines erroneously does the inverse: *'free choice'* is determining the identification of the NTP. There is no legal basis for this in the TSM Regulation, and as explained in section II above, there is no basis for this in the EECC or the TTE Directive either.

VI. The Guidelines should discuss the effects on Access Models in different networks

The guidelines should discuss the effects that different identifications of the NTP would have on regulated and voluntary access models in networks. The undersigned associations stress, that in the case of networks with a Point-to-Multipoint-Topology (PtMP) a suitable, performant NTP adapted to the actual network requirements is crucial. In particular where different providers offer their services over a shared access network ('shared medium') by regulated or voluntary access (Open Access) the deployment of user-owned active equipment terminating the network (ONT, Cable Modems – not routers) causes insurmountable problems. The lack of interoperability of those devices, and the mutual interferences arising from them, outdated firmware, and security gaps not only lead to a loss of service quality but make it impossible to deliver regular wholesale services. Here the transport happens below the IP level. Accordingly the network operator needs access to the terminal device (modem) in order to manage the bitstream product.

To use networks efficiently and with adequate quality (including the ability to monitor the network and its elements at any time) operators of shared media will have to maintain access to the active equipment terminating their network (NTP location 'B' of BEREC Report BoR (18) 159). Without such control of the active termination equipment provision of high-quality services in fibre networks and marketing of network access to competitors – which is necessary as a means of refinancing newly built fibre networks – will be severely impaired.

C. Comments on individual aspects

I. Incomplete assessment of equipment usage

In the note to figure to paragraph 7 BEREC considers that integrated devices may only by used when the NTP is at point A or C and cannot be used when the NTP is at point B. This does not take into account that such devices are only physically integrated but still consist of

two logically distinct devices. This means that the logical router part can be switched off and the device simply acts as a modem.

If, therefore, in scenario B the end-user wishes to use a router of his choice this can easily be achieved by switching off router functionality and connecting the separate router device to the integrated device.

The note in question should therefore be amended or deleted.

II. Services provided by the operator at/through the NTP

In paragraph 11 BEREC states that operators have the obligation to describe the characteristics of the NTP in order to permit the design of TTEs to be capable of utilising all services provided through the NTP.

Considering the fact that e.g. OTT services are necessarily provided through the NTP but are by no means to be described nor controlled by the operator, the word 'through' needs to be replaced by the word 'at' (all services provided *at* the NTP). The same applies for wholesale products offered by the network operator to competitors on the service level (s.a.).

III. TTE Market observations are incorrect

We have explained in chapter B, section IV above that there is no legal basis to involve the state of the TTE market in the identification of the NTP. As a result, we believe that this section should be removed. Nonetheless, we do want to address the arguments used in this section, as we believe they misinform decision making.

For 'point A', the point furthest away from the end-user's end-point and closest to the operators', the draft Guidelines consider in §35 that the CPE market is affected as follows:

a. It has a relatively high number of customers (the end-users) and each of them may have different needs.
b. Vendors may develop a variety of different devices in order to meet these customers' demand.
c. Then end-users would be able to buy devices on the CPE market which meet their individual needs to a comparatively large degree.
d. This may foster innovation on the CPE market.
e. The dependence of CPE vendors on a few large customers may be lower.

These are theoretical assumptions, as the draft Guidelines do not provide or refer to concrete evidence that backs up these assumptions. Notably, the supposed positive effects of a larger private network domain and the supposed negative effects of a larger public network domain are overestimated or unchallenged. Vice versa, the potential negative effects of a larger private network domain and the supposed positive effects of a larger public network domain are ignored or played down.

With regards to sub a., the draft Guidelines consider that a potentially higher number of individual buyers have a positive impact on competition and innovation in the CPE market. There is no reason to even assume that there currently are inefficiencies in this market in terms of innovation and competition to begin with, let alone that increasing the number of buyers

would be a critical factor in changing that if that were the case. On the contrary, the current market reality is that a large number of operators that offer these CPEs have more relevant buying power than individual customers. It has to be noted in this context that the majority of end users is not interested in acquiring their own modem. What they want to choose freely is the router, which is possible without any restrictions. In addition, operators can cooperate with OEMs to develop innovations which support new network functions and service capabilities. In shared media networks like HFC and GPON fibre networks (FTTB/H) standardisation steadily evolves according to new technological steps (e.g. NG-PON). In the initial phase of such development compatibility is usually limited to components by one supplier, which then broadens over time and finally results in comprehensive standardisation. None of these points are considered here, or in the sections regarding other potential NTP locations (point B and point C, in section 3.2.3 and §41 respectively).

With regards to sub b., the draft Guidelines assumes that individual CPE buyers will have sufficient effect on OEMs to develop devices towards their demand. This assumes that both individual buyers can effectively articulate their specific needs, and that OEMs are able to receive those needs. Furthermore, there should be enough individual buyers having those demands in order for OEMs to efficiently develop innovations to cater to those demands. In addition, these demands need to be not overlapping with what operators already request from OEMs. More likely, however, operators are better able to articulate their needs, due to their stronger buying relation with the OEM, they know better what network technology improvements are in their pipeline, and offer OEMs a stable return on investment. It is i.e. necessary for network operators and equipment manufacturers to collaborate. Devices that are not customised for a given shared media network may cause loss of service quality and security issues. None of this is considered here, or in the sections regarding other potential NTP locations (point B and point C, in section 3.2.3 and §41 respectively).

For the reasons listed above for sub a. and sub b., it is doubtful whether sub c. and sub d. would materialise at all.

Sub e. seems to exist on the assumption that OEMs are currently bound by few large customers and implies that this leads to negative effects on the market. Due to the functioning of the TTE Directive, this market is liberalised and any OEM can serve any of the hundreds of operators in the EU. By no means is there “few large customers” which OEMs are dependent on, but more importantly, there is mutual dependence and good cooperation between OEMs and operators to deliver quality products and services to their customers. In order to prevent potential competition issues caused by bundle effects it might be an option to oblige manufacturers to physically split modems and routers (no more integrated devices).

D. Correctly identifying the NTP

The draft Guidelines recommend the assessment of certain criteria under which operators have to demonstrate that a certain device needs to be in their domain ‘for objective technical reasons’.

As explained above, we consider that neither the assessment of the NTP’s location is driven by technical necessities, nor is it the operators task to deliver proof of any circumstances in

this regard. It is a legal task of each NRA to apply the NTP definition of Art. 2(9) EECC, and identify (not wish for) the physical point based on where it is specified the and apply it to a given network topology.

Given that the NTP needs to be addressable itself – at least for routed and switched networks as used to provide internet and telephony services – the key question is to answer which element of the network in question is the first one where an end-user can be addressed, in order to establish an individual connection for communication.

This is to be answered differently on the topmost level of abstraction prescribed by the EECC's mandate to BEREC – network topology. In P2P networks the end-user can be individually addressed by an immovable physical point – the socket at the end of the local loop – and its dedicated connection to the next element in the operator's network. In P2MP networks, on the contrary, there is no such individual connection but the individual connection must be achieved logically, i.e. the provision of a unique address by an active device. The draft Guidelines should be amended to include such analysis for all relevant network topologies.

E. Recommendations

The undersigned urge BEREC to re-assess the task commissioned to them and especially to elaborate on the implications of the terms 'the location of different network termination point**s**' and 'in different network topologies' as provided for in Art. 61(7) EECC. The undersigned hold that these terms clearly point to the following conclusions not yet considered in the Document:

(1) There is no single network termination point but different ones.

(2) The main differentiating criterion of networks to be considered is the network topology.

(3) Different network topologies therefore have different network termination points.

In the light of these conclusions, a common approach will have to describe the relevant differences to be observed in existing network topologies and the consequences this will have for the application of the definition of the network termination point in Art. 2 No. 9 EECC.

Prior to BEREC drafting the document there have been several statements by interested parties which have elaborated on both the existing types of network topologies (Point-to-Point network and Point-to-Multipoint network) and the differences they present in view of the definition. These statements have indicated that the crucial difference of both topologies is the addressability and individualisation of the end-user (the core criterion set out in Art. 2 No. 9 EECC) which can be done either 'passively' (in other word 'physically') with a Point-to-Point connection or 'actively' (in other word 'logically') in a Point-to-Point network by using a termination device.

The undersigned therefore recommend that BEREC stipulates the following common approach:

(1) A distinction is to be made between the network topology of Point-to-Point networks and Point-to-Multipoint networks.

(2) Within the respective network topology the network termination point shall be where the end-user is granted network access by an individual network address.

(3) In Point-to –Point networks the individual network address usually is attached to the dedicated local loop.

(4) In Point-to-Multipoint networks the individual network address cannot be not attached to the local loop but to a device attached to it.

For further questions or further discussion of the points made in this opinion, do not hesitate to contact the undersigned associations.

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