BoR PC07 (19) 35
21 November 2019

Response

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

A. Introduction

Cable Europe welcomes 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 submission addresses what we believe are critical issues with the draft Guidelines. Issues which, in our opinion, should lead to a re-evaluation of the draft. While the response given below is critical, we are convinced that this is fair given the disconnect between the draft Guidelines on the one hand, and the task with which BEREC is legally entrusted as well as the technological realities of networks on the other hand.

In our view, this could have largely been prevented if BEREC had engaged in a timely interaction with stakeholders. Network topologies are conceptually already complex, but even more so in real life scenarios. Cable operators in general and Cable Europe in particular have always been constructive towards BEREC, even if we do not always fully agree on the approaches taken. In this case, we have not been given ample opportunity to exchange views with BEREC on the draft Guidelines and we think this is one of the reasons why the draft Guidelines are not fit-for-purpose.

We call upon BEREC to consult again with stakeholders before finalising the Guidelines.

Key issues with the draft Guidelines

According to article 61(7) of the European Electronic Communications Code (EECC), BEREC is tasked with the adoption of guidelines on common approaches to the identification of the network termination point (NTP) in different network topologies. The draft Guidelines present a prescriptive catalogue of criteria to be assessed in each individual case (or device). Cable Europe believes that, in accordance with the

requirements of Article 61(7) EECC, BEREC should rather provide actual approaches or best practices on the issue than offering a prescriptive catalogue of normative criteria.

In addition, the draft Guidelines should stay within the legal boundaries set by the EECC. Instead, as currently drafted, they take a wider approach and by doing so there is a risk that NRAs impose requirements that go beyond the merit of the law. By design, the draft Guidelines should not be drafted in such a way as to set out legal provisions beyond those provided by the EECC.

Furthermore, BEREC does not consider different network topologies as required by the EECC. The draft Guidelines neither assess which network topologies are available, nor which differences they comprise. This is surprising as several detailed statements by interested parties have been provided to BEREC prior to the preparation of the draft guidelines precisely on the existence of such different topologies and their relevant differences.

We provide more detail on each of these issues below. In section B, we share our comments regarding the legal basis of the draft Guidelines and the issues we have encountered. In section C we go deeper into specific issues of the material assessments made in the draft Guidelines.

B. Legal basis and application of the relevant articles

The draft guidelines depart from the scope of the mandate and the legal basis provided by Article 61(7) and Article 2(9) of the EECC on the definition of NTP. This is problematic because as currently drafted, the guidelines invite NRAs to choose the location of the NTP based solely on their own judgement and not strictly on the basis of the definitions provided by the EECC. We consider that BEREC's mandate is limited to simply identify the NTP's technical location in accordance with the definition set out in Article 2(9). We explain this in sub- section I below.

Secondly, the draft Guidelines drift away from the definition of the NTP contained in Article 2(9) of the EECC. According to this definition, the NTP is identified *"by means of a specific network address"*. However, the draft guidelines do not follow this strictly but extend this term beyond its meaning, allowing NRAs to potentially identify the NTP not at the specific network address but before or after it. This creates a variability in the NTP

that is especially problematic in shared medium networks. We explain this in sub - section II below.

Thirdly, the draft guidelines suggest the competitive state of the telecommunications terminal equipment (TTE) market to be an important consideration for determining the NTP. Aside the issue that identifying the NTP is not a choice but a matter of technological fact, analysing 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 on an obvious misunderstanding of its scope and aim. We explain this in sub - section III below.

Finally, the draft guidelines invoke the 'free choice of terminal equipment' requirements in the EU TSM Regulation (Regulation 2015/2120) to determine the NTP, whereas the objective of the Regulation is to ensure free choice within the existing range of terminal equipment, but not to alter the demarcation between public and private network. Please read sub-section IV below.

I - The draft guidelines enable NRAs to 'choose' the NTP, instead of helping them to 'identify' it

BEREC recognizes that their 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 Article 61(7) EECC, which foresees the adoption of guidelines by BEREC.

However, looking at the parameters that the draft Guidelines advise NRAs to take into account, it seems that draft Guidelines immediately drift away from its original tasks. The key parameters proposed by BEREC to 'identify' the NTP do not actually help NRAs in identifying the NTP as defined by Article 2(9) EECC. Instead they offer the possibility to choose what the NTP should be, based on alleged (and questionable) regulatory advantages or disadvantages.

The EECC provides for a clear definition of the NTP in Article 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 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 define "*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*", not for promoting regulatory objectives. This merely indicates the importance of the NTP as a demarcation line between public and private network domains – it does not justify an interpretation that allows the boundary to be chosen by NRAs for increasing the scope of effect for regulation.

This means that identifying the NTP should not be a judgement call by an NRA based on which point best promotes a particular set of parameters as proposed by the draft Guidelines. Instead, what the draft Guidelines must do according to Article 61(7), is to provide guidance on the individual elements of the NTP as defined by Article 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 involves assessing the current and future technological reality in network topologies. It is not a task in which there is discretionary opportunity to determine any given location as the NTP, which happens to serve the purpose of the parameters chosen by BEREC (or the NRA, respectively). Therefore, parameters such as:

- "The impact on the TTE market" (section 3.2 of BEREC's draft)
- "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 suitable to identify the location of the NTP. They are instead tools that can be used to promote different regulatory objectives. The definition of Article 2(9) 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. Cable Europe is of the position that the inclusion of the above parameters is not only unnecessary, but it is also inappropriate and at odds with the legal mandate provided by the EECC to BEREC. The draft Guidelines go beyond the mandate given by the EECC and BEREC should therefore remove those parameters from the final version of the document.

II - The draft Guidelines incorrectly attributes the term 'by means of'

Both §18 and §19 of the draft Guidelines interpret the term '*by means of*' in Article 2(9) EECC and broaden it to mean '*with the help of*'. Unjustifiably so, as the wording of Article 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 cohort of network elements to become the NTP to some devices near (before or after the point specified by the network address) the actual 'technical' NTP.

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 (optical network terminal) or cable modem, which would consequentially 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 enters 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 its regulatory duties imposed by relevant legislation. In concrete terms, operators would not be in a position to provide QoS as they would not be aware of the limits of their networks, monitor the device or even find an end-user in cases of emergency – something that can have critical adverse results if an end-user calls for emergency services without the ability to give his actual location verbally.

We believe that the interpretation in the draft Guidelines leads to an incorrect application of Article 2(9) EECC and creates uncertainty for network operators. The wording of this article is clear in that the NTP is a physical (hence: tangible) location and that it defines a definitive and stable boundary between the end-user's domain and that of the operator, which cannot be changed by action of the end-user.

III - No legal basis to weigh in with the competitive state of the TTE market

In section 3.2 of the draft Guiedlines, BEREC explores the impact of the definition of the NTP on the so called "TTE" (telecommunications terminal equipment) market, particularly in terms of competition and innovation. This evidently shows that the draft Guidelines, as currently drafted are not based on objective technological realities.

By raising the issue of the competitive state of the TTE market, the draft guidelines make use of a legacy instrument which enables NRAs to steer market behaviour through analysing the effects of various choices of the NTP location, and basing that choice, amongst other things, on the outcomes of "competition and innovation" for the TTE market. This type of intervention misappropriates the scope of the TTE Directive, goes well beyond the mandate of Article 61(7) of the EECC and is incompatible with competition law. In addition, the assumptions made in section 3.2 of the draft Guidelines are incomplete and often incorrect.

In §29, the draft Guidelines state 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 conclusions regarding the "*degree that the NTP location fosters innovation and competition on the TTE market*" depending on different NTP locations.

Here, the draft Guidelines conspicuously misjudge the intent of the TTE Directive. This directive is a follow up work of directives originally adopted in the '80s and '90s, specifically to address a key issue within TTE markets which stems from the time where 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 clear from the recitals and articles of the TTE Directive that this instrument is exclusively aimed at removing exclusive rights granted by the 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, *"[…] that users must be allowed a free choice between the various types of equipment available if they are to benefit fully from the technological advances made in the sector"*, as BEREC only partially (underlined) points out in §28. But this does not justify the draft Guidelines' approach in section 3.2.

Firstly, the analysis made by the draft Guidelines in that section regarding the TTE market is related to the state of competition in the TTE market. However, it is first and foremost the remit of the European Commission and of 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 Articles 101 and 102 of the Treaty on the Functioning of the EU.

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 NRAs to base their decision on NTP location on parameters that are inherent to competition law. To the contrary, by doing so NRAs would circumvent existing procedures and safeguards, contrary to the basic legal EU principles.

Secondly, while the draft Guidelines partially quote the justification contained in recital 3 of the TTE Directive regarding '*free choice*', 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 the Member States. The Directive is strictly limited to this issue. Its articles provide no basis for BEREC to isolate and extrapolate the promotion of competition in the TTE market and the scope of the assessment of the NTP under Article 2(9) EECC from an excerpt from recital 3.

Finally, even if the TTE Directive provided such a legal basis, the cited section considers a free choice for "users". However, the draft Guidelines conflate "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 the draft Guidelines 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 the draft Guidelines to take the EU legislator’s place and create a broader legal scope for existing legislation. The EECC creates a clear boundary between the operator’s domain (where there is no ‘TTE freedom’) and the end-user’s domain (where there is full freedom), and leaves no room for this boundary to be shifted merely to foster competition in the TTE market. For the avoidance of doubt, Cable Europe does want to express that its members consider routers to be in the end-user’s domain, and hence subject to free choice. This is standing practice for most operators currently, and actively facilitated. (See also sub-section section C.I).

IV - The draft guidelines incorrectly rely on net neutrality rules

The draft guidelines further rely on 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 place the demarcation point further up the public communications network, beyond the actual network technological point. The draft Guidelines rely on “*the objective technological necessity*”, a parameter in BEREC’s Open Internet Guidelines that was originally intended to determine whether an ISP justifiably provides *“obligatory equipment”* or whether they unjustifiably restrict free choice.

The draft guidelines incorrectly rely on “*the objective technological necessity”* as a means to actively broaden the domain of TTE equipment by using this parameter to choose the NTP location. Regulation (EU) 2015/2120 (the TSM Regulation), which BEREC’s 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 free choice within the existing domain only.

The correct identification of the NTP should help determine which equipment in the private domain of the end-user is subject to *‘free choice’.* However, the draft guidelines erroneously do the inverse: *‘free choice’* is used to determine the identification of the NTP. As we have also argued above, there is no legal basis for this in the TSM Regulation, neither in the EECC nor in the TTE Directive.

C. Comments on specific issues

I. *Incomplete assessment of equipment usage*

In the note to the figure in 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 the 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 §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'.

III. *TTE market observations are incorrect*

As we have explained in section B, sub - section III, there is no legal basis for BEREC/NRAs to weigh in with the state of the TTE (telecommunications terminal equipment) market when identifying 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.

As regards '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 customer premises equipment (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 are currently inefficiencies in this market in terms of innovation and competition, 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 CPEs have more relevant buying power than individual customers. In addition, operators can cooperate with OEMs (original equipment manufacturer) to develop innovations which support new network functions and service capabilities. 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 assume 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 for 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 relationship with the OEM, they know better what network technology improvements are in their pipeline, and offer OEMs a stable return on investment. None of this is considered here, nor 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.

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 technological necessity’.

As explained above, we consider that neither the assessment of the NTP’s location should be driven by technological necessities, nor it is 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 Article 2(9) EECC and identify (not wish for) the physical point based on where it is specified 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 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, including for switching and routing made through HFC networks.

E. Recommendations

I - General recommendations

Cable Europe urges BEREC to carefully review the task it has been entrusted with by Article 61(7) EECC. Based on that review, the scope of the Guidelines should be clearly set, and BEREC should take due care not to go beyond the legal boundaries provided for in the EECC, and not conflate the task with regulatory objectives from other legislative instruments, especially if they rely on an incorrect interpretation of the meaning and objectives of those instruments.

The task that is laid out for BEREC in Article 61(7) EECC is a factual exercise, not a mandate to promote policies through arbitrary choices. Accordingly, BEREC should:

A. Define a list of network topologies;
B. Disseminate the technical factors or properties that help identify the individual relevant elements of the definition of NTP in Article 2(9) EECC, namely:
    i. “the physical point”;
    ii. “at”;
    iii. “provided with access to a public electronic communications network”;
    iv. “identified”;
    v. “by means of a specific network address”; and,
C. Connect these technical factors to network technologies.

BEREC should do so in a manner that is robust in current networks, but also that takes into account relevant developments in network technologies that are relatively close to market adoption and can be analysed with sufficient predictability.
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 NTP in Article 2 (9) EECC.

We believe it is expedient for BEREC to work in close cooperation with industry stakeholders to ensure that the work reflects technological realities and does not depart from the concrete implementations in networks. To that end, we believe it is necessary for

BEREC to consult before and after drafting the next revision of the draft Guidelines, on more specific topics such as concrete network topologies.

II - Specific recommendations

Prior to BEREC drafting the draft Guidelines, several statements by interested parties have made 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 Article 2(9) EECC) which can be done either 'passively' (in other words 'physically') with a Point-to-Point connection or 'actively' (in other words 'logically') in a Point-to-Point network by using a termination device.

Cable Europe therefore recommends 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 attached to the local loop but to a device attached to it.

***

About Cable Europe

Cable Europe is the trade association that connects leading broadband cable TV operators and their national trade associations throughout the European Union. The regulatory and public policy activities of Cable Europe aim to promote and defend the industry's policies and business interests at European and international level. The European cable industry provides high speed broadband internet, TV services, and telephony to more than 65.8 million homes in the European Union.