BEREC Guidelines on the implementation by National Regulators of European Net Neutrality Rules

Telecom Italia answer to Public Consultation – July 18th, 2016

General comments

Telecom Italia welcomes the possibility to comment on the BEREC Guidelines on the implementation by National Regulators of European Net Neutrality Rules.

Telecom Italia maintains that the draft BEREC guidelines do not respect the scope of Regulation 2015/2120, because they de facto introduce further levels of regulatory intervention, in areas that are not provided for by the Regulation itself: by providing definitions that are not part of the Regulation, the guidelines do not respect the spirit of the EU legislator and include – to a non-reasonable extent - services susceptible of being regulated for the purpose of protecting "open internet" principles.

The final text of the Regulation is the outcome of a compromise reached after two years of tough negotiations between the European Institutions, whereby every single word and expression has been debated at length and finally agreed upon. To cite a significant example, no reference to "Net Neutrality" is ever made in the text of the Regulation. By contrast, the very title of BEREC Guidelines refers to a biased concept which has been long debated but founds no legal basis in EU legislation. The focus of BEREC is clearly shifted towards a strict control on how operators manage their networks and deliver their services instead of ensuring the openness of Internet, which is the main goal of the Regulation itself.

Indeed, the final text of the Regulation represents a balanced approach to ensuring, on the one hand, an Open Internet for end-users and, on the other hand, leaving enough flexibility for IAS providers to manage their IP network, provide services other than IAS and avoiding hampering innovation in an evolving scenario toward 5G and the Gigabit society.

Telecom Italia would like to recall that the internet has developed over the past decades as an open platform for innovation with low access barriers for end-users, providers of content, applications and services and providers of internet access services. The legislative outcome of the latest European review of rules for electronic communications is a framework that aims at promoting the "ability of end-users to access and distribute information or run applications and services of their choice". Such outcome should be respected because it has allowed the fast development of many new services and applications. The artificial limitation of the ability to provide innovative services on top of Internet access services risks to seriously hamper innovation for the purpose of offering new services to citizens.

Therefore, for the reasons that are stated above and that are detailed in the following paragraph, Telecom Italia calls on BEREC to review the draft guidelines and, by doing so, refrain from introducing layers of regulation for services other than those defined in the Regulation. Absent such changes, the guidelines will no doubt restrict market players' ability to develop new services and hinder the investment capacity in new advanced ultra-broadband products.

Scope of the guidelines

The scope of the guidelines is clearly detailed in art 5 par 3 of the Regulation (EU) 20105/2120 ("Regulation") and it is to provide "*guidelines for the implementation of the obligations of national authorities under this article*", article on supervision and enforcement which specifically refers to monitoring and ensuring compliance with art. 3 and 4 of the Regulation by NRAs.

The draft guidelines do not appear to respect the Regulation because they broaden the scope of discretion and power that NRAs have in implementing the Regulation itself. In other words, while art 5 of the Regulation empowers BEREC to define how NRAs should implement their well-defined obligations under the new legislative measures, BEREC has issued an over-prescriptive document that radically changes the boundaries of the set of services over which NRAs can intervene to safeguard the "open internet" and "transparency", unduly introducing new regulatory conditions and measures for all services provision. Furthermore, the guidelines raise doubts on their consistency with the powers and objectives of NRAs under art. 8 of the framework directive.

Terminology

The draft guidelines (guideline 2) introduce definitions that are not included in the Regulation, thereby exceeding their mandate and creating confusion on the scope of the rules. Indeed, BEREC only has the authority to interpret, if needed, the definitions provided by the legislator within the Regulation and not to create new legal definitions.

Specialised services

The Regulation explicitly regulates Internet Access Services (IAS), defined as "*publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used*", leaving the freedom to offer "*services other than internet access services which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality*". The only conditions for the supply of such services is that they are not "*usable or offered as a replacement for internet access services, and [are] not to the detriment of the availability or general quality of internet access services for end-users*".

If BEREC wants, for the sake of simplicity, use an acronym for the "other than internet access services" as defined above, this should be something that specifically reflect the intention of the legislator (such as "OIAS") and not introduce a term, "specialized services" that has been discussed and discarded during the legislative process.

The term "specialized services" has a "limiting" connotation and leads to unnecessary categorizations of services and limitations on what is included in such services. Indeed, it leads to an inappropriate focus on the demonstration of the optimization needed for a specialised purpose and it leads to consider specialised services as services that require an extensive use of traffic management and prioritization at network level (up to layer 3 of the osi model), therefore potentially implying an impact on IAS. We wish to remind BEREC that this is not necessarily true and that services can be also delivered with high level of quality of experience for the end-user using solutions that are on top of the IP network layer (above layer 3 of the osi model); those solutions do not require any traffic prioritization and therefore have by definition no impact on IAS, but still qualify as OIAS. OIAS category is broader than the "specialised services" category

proposed by BEREC; in fact OIAS include all the services that are not IAS and also services that do not need to be built on top of IAS delivery.

We therefore urge BEREC not to refer to "other than internet access services" as "specialized services" but rather use the acronym OIAS.

Application

BEREC refers to content, application and services provided on top of the network as "application" while using the term "service" for the underlying electronic communication service. By making this distinction, BEREC implies that all "application" are provided by OTTs and deserve protection while telco operators services must abide by the rules set by the Regulation. This definition is not technologically neutral as obviously also Telco providers could also supply "applications" in addition to network services.

Telecom Italia does not see the need to insert this distinction , as it is not present in the Regulation and it could introduce further complexity and confusion.

Sub-internet service

The category of sub-internet services (guideline 17, 35, 52) doesn't exist in the Regulation and should not be introduced by BEREC guidelines.

We understand the intent of BEREC is to underline that services restricting access to services or applications are not allowed, but this is already clearly stated in art 3 of the Regulation without any need to refer to a sub category of IAS.

Moreover, services that, upon user request or need, allow access only to a pre-defined part of the internet (e.g. limited number of end-points) should be considered as OIAS and assessed against the rules set in the Regulation for such services.

Telecom Italia also challenges BEREC distinction between services where the number of reachable end-points is limited by the nature of the terminal equipment (e.g. smart meters), which are considered outside the scope of the Regulation (guideline 18) and services where the number of reachable end-points is limited by the service itself, such as VPN.

The right to provide a specific service or a limited number of services over an IAS at the customer demand should be available without discrimination to all undertakings in the digital value chain, not only to providers of terminal equipment.

We thereby urge BEREC to delete any reference to sub-internet service and carefully revise the mentioned examples.

End-user

BEREC incorrectly widens the understanding of the definition of "end-user" (guideline 4): namely it implies that both definitions - "user" and "end-user" are taken into account and on that basis CAPs are protected. However the Regulation uses the term "end-users" without implying CAPs inclusion and it is incorrect to widen its scope as to include them.

Reasonable network management

The Regulation states that traffic management measure, to be deemed reasonable, must be based on objectively different technical quality of service requirements of specific categories of

traffic. It follows that, within the same category of traffic, all traffic must be treated in the same way, i.e. applying the same network management measures.

However, while the Regulation focuses on the technical needs of the traffic, the draft guidelines go further and provide that "packets can normally be considered to be treated equally as long as all packets are processed agnostic to sender and receiver, to the content accessed or distributed, and to the application or service used or provided" (guideline 50), thus departing from the provision included in the regulation.

In relation to traffic monitoring, BEREC introduces new conditions (guideline 66) going beyond what discussed and agreed in the Regulation. In compliance with privacy rules, information contained at different protocol layers is used for an appropriate service provision and network management. Such information is analysed by the ISP in particular to optimize overall network resources management and overall quality and user experience, without being to the detriment of the availability or general quality of IAS, and in coherence with the international standard defined and implemented to route Internet traffic. Therefore the following formulation of guideline 66 is proposed: "*In assessing traffic management measures, NRAs should ensure that such measures do not monitor the specific content ~~(i.e. transport layer protocol payload)~~*".

Moreover, BEREC requires that "in order to identify categories of traffic, the ISP relies on the information provided by the application when packets are sent into the network" (guideline 61), and even that "Encrypted traffic should not be treated less favourably by reason of its encryption" (guideline 57, 61).

This guideline implies that, in order to decide whether or not to apply network management measures related to a specific category on a certain packet, IAS providers should rely on information provided by the header (IP+TCP) of the packets itself even when the traffic is encrypted.

This would lead to a high degree of risk for the IAS provider, opening the door to fraud, either by mismatching the header with the real content or by declaring one traffic for another in case of encryption. In some cases, when the application uses proprietary protocols, it would even be utterly impossible from a technical point of view.

Telecom Italia maintains that it would not be proportionate to require IAS providers to automatically apply the foreseen network management measures on traffic categories on the basis mentioned above. On the contrary, application/content providers would be required to declare the characteristics of the traffic they send in the network and agree with the IAS provider the technical details of the application of network management measures for specific traffic categories.

When the traffic is encrypted, the IAS provider, albeit not negatively discriminating it, will not be able to verify it for the appropriate treatment in accordance with the belonging category.

Exceptional network management

When considering the traffic management measures going beyond reasonable network management, allowed only in the specific cases listed in the regulation, with particular regard to preventing impending network congestion (art 3.3(c) of the Regulation), BEREC requires NRAs to monitor that ISPs properly dimension their network (guideline 89).

Telecom Italia maintains that BEREC is exceeding its mandate in making such a request and that NRAs should not be empowered to have a say in investment decisions of network operators but

should only monitor that rules set in the Regulation (not additional ones set by the BEREC guidelines) are not infringed.

Similarly, BEREC indication against application-specific congestion management constitutes a new regulatory condition not present in the Regulation. Such an indication unduly interferes with operator's technical choices and limits the technical solutions for the network management in case of congestion.

Other than Internet Access Services (OIAS)

The key principle of the Regulation, as written in Article 3(5), is that providers "shall be free to offer services other than internet services" under specific conditions. This acknowledgment of ISPs freedom to provide OIAS should be the starting point of BEREC analysis. Any suggestion of a procedure of ex-ante authorisation for OIAS provision would be in full contradiction with the freedom of service innovation guaranteed to ISPs by the Regulation.

Indeed, OIAS are not regulated as such in the Regulation but only their potential impact on IAS is considered. The draft BEREC guidelines, on the contrary, seem to impose a number of additional rules and conditions compared to what is included in the regulation.

No *ex ante* analysis is requested by the Regulation on OIAS and only the verification *ex post* of the fact that OIAS do not negatively interfere with general quality of IAS is foreseen.

Indeed, the verification on the fact that the optimization is necessary for a specific service should not be the main focus of the NRA assessment. Every provider, in accordance with its commercial strategies, should be free to offer any service different from IAS and not substitutable with it.

The Regulation requires that the "*optimization is necessary in order to meet specific requirements of content, applications or services for a specific level of quality*" (art 3.5); such "specific level of quality" can be either inherent to the service itself, which cannot be delivered at all without any operator intervention, or can stem from market driven demand, such as a premium service at higher quality than that possibly delivered by IAS.

OIAS should therefore not be considered exceptions with respect to IAS provision and every electronic communication provider should be free to offer services choosing the appropriate technological network solution.

What is important to outline, and is somehow lost in the choice of BEREC to categorize OIAS as "specialized service", is that optimization can take place at any specified level of the network and does not necessarily require prioritization in the network but can alternatively be pursued using other instruments (e.g. CDN) on top of the network. For this reason, the sentence "*the connection is characterized by an extensive use of traffic management in order to ensure adequate service characteristics and strict admission control*" (guideline 106) is not correct and should be erased.

The main focus of NRAs should be on the verification that the offered services do not unduly interfere with IAS or do not represent a discrimination for service/application/content offered on IAS.

Moreover, BEREC indicates that OIAS have to be offered by a connection that is logically separated from the IAS to assure specific levels of quality (guideline 106). The concept of logical separation is not present in the Regulation and once again BEREC is exceeding its mandate by introducing new rules, as already outlined in the general comments and in the paragraph on scope of the BEREC guidelines. Besides, this specific issue was discussed during the debate for the definition of the Regulation and the logically separated provision of OIAS was intentionally non imposed.

Besides, the technical way to make IAS and specialize services correctly functioning is a typical internal technical issue for operator's network and service design and it has various alternative solutions. These are evolving with innovative technologies within the network and at application level; the technological neutrality principle should be confirmed and Berec should not take any specific action on that matter. Therefore we urge BEREC to delete guideline 106.

In relation to the possibility expressed by BEREC to evolve over time the qualification (as OIAS or IAS) of an offered service (guideline 108), we deem it necessary to highlight that OIAS are services different from IAS and an improvement of technical performances for IAS does not generally impact on the categorization related to OIAS (in addition it has to be taken into account that optimized performances at IAS level are not generally sufficient to provide the appropriate levels of quality of experience). This is a new condition, unduly introduced by BEREC and not present in the Regulation, that negatively impacts on the provision of services causing regulatory uncertainty.

The proposed strong assessment procedures by NRA on "specialized services" and possible similar IAS-based services seem to propose a model according to which "specialized services" and IAS-based services can progressively become identical services, so that "specialized services" could disappear in the future. That is not a correct approach, since existing public available services has and will have unique characteristics, for instance regarding global interoperability, reachability and pre-defined QoS levels, also at communication session level. Besides, OIAS are often based on European technical standards (for instance NGN/IMS and its evolution) and in this case Berec should recognize such neutral technical standards without any further assessment.

As regards the verification of the sufficient capacity for IAS when OIAS are provided (guidelines 112-117), it should be restricted only to the cases where OIAS use IAS in a privileged way through a resources reservation or traffic prioritization. When OIAS is provided on top of IAS, it uses IAS resources as the other web services/applications/content and all traffic is treated equally, as mandated by the Regulation. Therefore, such verification would not be necessary as there is no possible degradation of IAS.

Furthermore, similar to the concept expressed in guideline 89 (see paragraph on exceptional network management), in guideline 112 BEREC mentions the need to make additional investments in the networks also in relation to "specialized services" (as OIAS are defined in the draft BEREC guidelines) to ensure that sufficient capacity is available so that IAS is not degraded. The same comment made above applies.

Moreover, Telecom Italia appreciates BEREC intention to clarify the distinction between a IAS traffic category and OIAS (guideline 72), but it is important to highlight that the most distinctive characteristic is that OIAS are not IAS. OIAS include a wide range of different services that include both services that cannot be classified as IAS according to the Regulation definition (when they don't allow connection to all end points of the internet), and services optimized to meet specific levels of quality not assured by internet access services offered by Telco and OTT on top of IAS, which can use also network solutions above the layer of IP transport that do not interfere with IAS through protocol optimizations, compression techniques, cache, etc.).

To better clarify the distinction between categories of traffic within IAS and OIAS, guideline 72 could be modified in the following way: "*BEREC understands that "categories of traffic" **related to IAS** should be clearly distinguished from ~~specialised services~~ **OIAS**. Article 3(5) clarifies that ~~specialised services~~ **OIAS are services different from IAS and** may be provided for optimization to meet requirements for a specific level of quality. On the other hand, any use of "categories of traffic" under Article 3(3) second subparagraph **refers to IAS and** is permitted for the optimization of the overall transmission quality **of IAS**, ref. Recital 9.*"

Finally Telecom Italia maintains that all the prescriptive measures and regulatory conditions on OIAS introduced by BEREC risk to hamper commercial and technological evolution discouraging the provision of new and different services by electronic communication providers as foreseen e.g. in 5G scenario.

VPN

As already highlighted, the Regulation clearly defines IAS as "*publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used*". Anything that doesn't meet the requirements specified in the definition cannot be considered IAS e should not be regulated as such.

Telecom Italia deems the distinction made between VPN applications and VPN network services as misleading. Although nowadays the notion of "VPN" could be divided between "VPN application" (over IAS) and "VPN network service" (over a OIAS)), this division is not future proof as it ignores the upcoming trends towards SDN and NFV, in particular to address business needs. Under SDN and NFV architectures existing dedicated private network resources will be replaced by software defined routers available in the Cloud and reachable on-line. By definition under SDN, "VPN network service" and "VPN application" will merge.

As indicated in the Recital 17 VPN should not be considered in any case a replacement of IAS also when used in the context of teleworking since they allow the employee to access to server of the enterprise with specific conditions.

VPN should therefore qualify as OIAS in any case as they only offer access to limited end-points.

Business offers

The general rule set out in the Regulation is that all traffic in relation with a given IAS should be treated equally, that IAS providers should not discriminate between CAPs and should not interfere in the relation between CAPs and end-users. But it does not imply that all individual IAS should be identical. Article 3.2 of the Regulation indeed explicitly supports the ability for ISPs to segment IAS on commercial and technical conditions and characteristics such as speeds and volumes. This segmentation may involve quality differentiation between individual accesses.

The need for segmentation is particularly relevant in order to provide business grade access. Therefore, NRAs should include in their analysis of non-discrimination the freedom for ISP to segment the quality between IAS offers provided to different end-users and answering different needs.

Quality segmentation between accesses of customers that have different quality requirements (e.g. business customers) is a typical case for which the freedom provided by the Regulation should apply. BEREC guidelines should explicitly support that traffic associated to certain access types (e.g. business) may be considered as a specific traffic category with specific quality requirements.

Commercial practices and Zero rating

The Regulation scope is to ensure end users right to an open internet and not to regulate marketing, pricing and product issues. To go beyond what was intended and have an ex-ante

type of approach to commercial practices, which would pre-define how companies shall develop its offers, set their prices and sell their services, would have a devastating effect on the free market economy. The imposition of strict limitations to commercial practices could discourage operators from proposing new services and pricing models that form a vital component of effective competition.

BEREC should keep in mind that competition legislation in Europe is fully equipped to deal with any problems which commercial practices could present and remain in line with the criteria set up in the Regulation.

The BEREC draft Guidelines should avoid potentially restricting customer choice, which is intended to be protected by Article 3(1) and 3(2) by preventing the customer from agreeing with the ISP the commercial and technical characteristics of their IAS. Under Article 3(2), end users have the right to agree the commercial and technical conditions and characteristics of their internet access service of their choice. Choice is a key concept throughout the Regulation.

Indeed, the Regulation specifically allows commercial practices as long as they don't limit the exercise of the right of end users to an open internet (art 3.2) and in the recital 7 it specifies that NRAs should intervene only in case end users' choice is materially reduced in practice, thereby confirming an *ex post* approach with assessment of single commercial practices on a case by case basis.

The draft BEREC guidelines on the contrary specifically addresses a particular commercial practice (i.e. zero rating), not singled out by the Regulation, and seems to presume an *a priori* negative effect of such practice on end users' choice as well as on competition.

Again, BEREC should focus on its mandate (refer to the paragraph on scope) and avoid introducing rules that impose additional burden on IAS providers and risk hampering innovation.

Specifically, BEREC opposes the possibility to zero rate one application (guideline 39); for the reasons given above, this is not in line with the aim and the terms of the Regulation. This guideline should be deleted and the Guidelines shall instead establish what is the standard for material reduction of choice for end-users and base such establishment on the existing competition law practice.

Openness should be a key point for NRAs when assessing a commercial practice concerning IAS. If all CAPs have the same rights and ability to conclude commercial agreements with ISPs, then the practice should be considered as compliant with the Regulation.

Also, BEREC indicates that a zero-rating offer where all applications are blocked (or slowed down) once the data cap is reached except for the zero-rated application(s), would infringe the Regulation (guideline 38). This (new) rule would hamper the possibility for operators to, for instance, provide customers with an opportunity to trial new services (ex: video or music streaming) or to enjoy necessary services such as customer services (topping up the mobile data bucket when the initial amount will be consumed) or speed test (as foreseen in article 4 (4)), or even essential access to top up pages, for example, in order to pay to continue using the internet in a simple and accessible way, without having to worry about their data consumption.

Transparency

The Regulation introduces additional obligations in terms of transparency requirements on the internet access services but only sets at a high level what information is to be provided leaving some flexibility to operators on how to comply with the obligations.

The draft BEREC guidelines significantly narrow down the provisions by introducing very prescriptive details on how minimum, normally available and maximum speed have to be determined (guidelines 140-154). The definition of minimum speed is especially relevant as non-conformity of performance to the agreed minimum speed triggers the customers' right to terminate the contract. Setting a proportion between minimum and maximum speed, as well as strictly imposing that maximum speed be achieved at least once a day, will necessarily force IAS providers to lower the values of such parameters to the level of the "slowest maximum speed" achieved with certainty in the whole network, as many variables concur to determining the speed at different locations, not only for mobile but also for fixed connections (e.g. distance from the cabinet). This would result in end users possibly experiencing speeds that are higher than those contractually set as maximum speeds.

Moreover, BEREC, by requiring the application of the transparency provisions to all contracts regardless to the date the contract is concluded or renewed (guideline 130), is once again setting new rules, which are not foreseen by the Regulation. The Regulation clearly defines that all provisions apply from 30 April 2016, with the exception of art 4.4, which applies to contracts concluded or renewed from 29 November 2015.

Besides the "unlawfulness" of BEREC new rules (please refer to general comments and scope of BEREC guidelines), Telecom Italia challenges the proportionality of such requirements. As mentioned above, to abide by the BEREC indications, IAS providers would most certainly have to modify the terms of their contract, albeit not modifying the underlying service, which would trigger termination rights.

Telecom Italia maintains it was not the intention of the European Institutions to retroactively apply these provisions; in that case a specific provision would have been introduced to avoid such event, similar to what has been foreseen with reference to roaming (whereas 30 of the Regulation "[..] *where providers of Union-wide regulated roaming services make changes to their retail roaming tariffs and to accompanying roaming usage policies in order to comply with the requirements of this Regulation, such changes should not trigger for mobile customers any right under national laws transposing the current regulatory framework for electronic communications networks and services to withdraw from their contracts*").