The Consumer Voice in Europe

BEREC Guidelines for Quality of Service in the scope of Net Neutrality

BEUC response to the public consultation

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Introduction

Net neutrality is one of the fundamental principles of the internet, which has allowed it to significantly enhance citizens' participation in society, access to knowledge and diversity, while promoting innovation, economic growth and democratic participation.

Defining net neutrality is of key importance in order to understand which underlying principles should be protected. From the consumer perspective, net neutrality is the principle that all electronic communication passing through a network is treated equally, independent of content, application, service, device, source or target.

In a neutral network, consumers[1] are entitled to:

1. An internet connection of the speed and reliability advertised to them.

2. An internet connection which enables them to:
   a. Send and receive content of their choice;
   b. Use services and run applications of their choice;
   c. Connect hardware and use software of their choice which do not harm the network;
   d. Use any communication method to reach any destination from any point on the internet without restrictions.

3. An internet connection which is free from discrimination as to the type of application, service or content.

4. Competition between network, application, service and content providers.

5. Know which network and traffic management practices are deployed by network providers.

Consumers rely on Internet Service Providers (ISPs) and telecoms operators to access this wealth of resources and applications. They expect ISPs to comply with the fundamental principles of openness, inter-operability and neutrality which constitute the foundations of the internet's architecture. They expect their internet connection to allow them to access any content they choose, from any point on the network.

Nevertheless, various parties, such as network operators providing end-user connections, challenge the neutral architecture of the internet when they undertake certain discriminatory activities, thereby also undermining users' rights. The European Union missed the opportunity to safeguard the neutrality of the internet in Europe during the revision of telecoms rules in 2009. By recognising the possibility for network providers to engage in traffic management as a default rule, the EU has opened the door to unfair and discriminatory traffic control of the Internet.

The extent of the problem related to infringements of net neutrality by telecoms operators is accurately disclosed through BEREC's fact-finding exercise undertaken in early 2012[2]. For instance, BEREC's findings show, that one in every two

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[1] "Resolution on network neutrality", Transatlantic Consumer Dialogue, April 2010.
[2] "A view of traffic management and other practices resulting in restrictions to the open Internet in Europe", BEREC BoR (12) 30, 29 May, 2012.

Europeans may not have the option to use Voice-Over-Internet Protocol (VoIP) services on their mobile broadband service; that two in three Europeans may be subject to illegitimate discrimination of their internet connection due to their ISP's commercial decision to focus resources on specialised services; or that many ISPs are prioritising specific content as a general practice and especially during peak times.

BEUC believes that specialised or managed services cannot be confused with Internet Access Services (IAS) which offer a connection to the public internet. We are concerned that ISPs' decision to dedicate resources to specialised services is to the detriment of their Internet Access Services. Therefore, we strongly object to any activity related to an ISP's specialised service which influences the neutrality and Quality of Service (QoS) of an internet connection of an end-user.

Need for an EU legislative approach vis-à-vis net neutrality

BEUC has been consistently supportive of a legislative approach to net neutrality. Given the divergence in implementation by Member States of the new Telecoms Package, BEUC is continuously calling upon the European Commission to undertake further legislative action to ensure net neutrality is enshrined in law and to guarantee consistent implementation across all Member States.

Otherwise, the risk of divergent rules across Europe is very high. This is contrary to the objective of the Digital Single Market and the nature of the internet as a borderless environment. Europe cannot afford to miss a second chance to safeguard net neutrality to the detriment of freedom of expression, consumer choice, innovation and competition. When considering policies which might affect the neutrality of the internet, the interests of consumers and users need to be safeguarded.

The crucial role for BEREC: need for more ambition

Whereas the European Commission must assume its responsibilities and respond to the calls made by the European Parliament[3], the Economic and Social Committee[4], citizens' rights groups and consumer associations across Europe for the adoption of legislation specifically protecting net neutrality, the role of BEREC is crucial in ensuring coherence in the approach of national regulators. BEREC's work on four different aspects of net neutrality – Quality of Service, Transparency, Competition and IP Interconnection – represent steps in the right direction and are much welcomed. However, BEREC must be more ambitious, with regard to the interpretation of key provisions of the Telecoms Package, the gathering of evidence on net neutrality interferences and the use of the powers conferred by the current legal framework.

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[3] "Resolution on the open Internet and net neutrality in Europe", European Parliament, 7 November, 2011.
[4] Opinion of the European Economic and Social Committee on the 'Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: The open internet and net neutrality in Europe'.

In order to ensure legal certainty, it is of utmost importance that certain key concepts are well defined. These definitions, together with a clear list of consumer rights related to net neutrality and a set of prohibited discriminatory activities for telecoms operators, should be the backbone of any legal instrument adopted to protect net neutrality. Establishing clear, well-defined concepts such as 'legitimate traffic management measures' is important to ensure all implementation measures at Member State level are coherent and there is clear legal certainty for consumers across the EU.

Without full legal protection, net neutrality needs strict Quality of Service requirements

Considering that net neutrality is not fully protected by European law, the adoption of guidelines on Quality of Service (QoS) requirements is an important step to reduce the amount of illegitimate discriminatory activities across Europe. Net neutrality not only needs to be protected, but it needs to be restored. However, we are greatly concerned that these guidelines will unfortunately not, even in combination with other regulatory efforts such as enhanced transparency, serve as a fully efficient remedy.

BEUC considers the results of BEREC's fact-finding exercise to have provided clear evidence of numerous degradations of service and discriminatory practices in the two categories outlined by BEREC in its Guidelines for Quality of Service in the scope of Net Neutrality[5]: both in the internet access service as a whole and in individual applications using the Internet Access Service. Therefore, it is very important that BEREC and National Regulatory Authorities (NRA) urgently adopt minimum QoS requirements in both categories in order to restore and protect the neutrality of internet connections across Europe and respect users' rights. Hence, the principles outlined in this consultation apply to both categories.

While BEREC's suggested high-level regulatory approach described in the guidelines is very thorough and complete, it unfortunately only offers slow, *ex-post* solutions to the problem. The urgency of the situation which BEREC has portrayed in its fact-finding exercise requires immediate action not only to restore the neutrality of all internet connections, but also to prevent its violation repeating.

Therefore, it is of crucial importance that further to this high-level, *ex-post* regulatory approach, BEREC adopts a set of basic, enforceable principles which ISPs have to meet when commercialising access services to the internet.

Switching as a remedy is a myth

Moreover, as BEREC recognises in its Guidelines, switching is also not a solution because it generally comes at a cost: switching costs include contract cancellation fees, costs related to setting up the new network and installation costs, as well as those related to informing third parties of the new contract information. Furthermore, switching may not be possible for customers who are confronted with

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[5] "Draft Guidelines for Quality of Service in the scope of Net Neutrality", BEREC BoR (12) 32, 29 May, 2012.

a limited choice of operators available in a specific geographic area. They could also find themselves in a bundled contract while only wanting to switch operators for the internet access, but not having the possibility to do so.

The European Commission's 2011 Consumer Scoreboard[6] shows that 80% of consumers have not switched internet providers, proving yet again that switching by consumers in the telecoms market remains very low. Furthermore, of the remaining 20%, only 10% have switched to a different operator, with the remaining 10% switching services under the same operator. The latter would never solve a problem of discriminatory differentiation if all the ISPs' offers enact the same kind of practices. Last but not least, of the consumers who switched in 2011, only 50% found the switching process to be easy.

Transparency and Quality of Service

The relationship between Quality of Service and transparency is very important. Consumers need to be properly informed and be able to clearly understand what quality of service they can expect from an Internet Access Service.

Consumers are entitled to receive clear, understandable, precise, complete and accurate information on the Internet Access Services they buy. This includes information related to their ISP's policies and procedures on network management and how these may affect access to particular content, services, applications, or the ability to attach particular devices. Consumers need to be able to know the performance they can expect from their internet access under normal conditions. They also should be well aware of any potential influence on their internet connectivity from other services they may have under a bundled package, such as specialised services.

However, we believe it is important to warn against an over-reliance on transparency. Given the very low levels of consumer awareness regarding traffic management issues and the technical complexities of the issues at stake, transparency will only produce positive effects if accompanied with other regulatory instruments which provide clarity on discriminatory practices.

Furthermore, existing information models on traffic management need to be substantially improved. The low awareness of traffic management and the opaque and inconsistent way the information is presented raises the need to improve the information models currently available. A qualitative research commissioned by BEUC's member Consumer Focus[7] and an omnibus survey carried out in the UK[8] found very limited awareness of the term 'traffic management' among consumers. Participants who took part could not understand the term, found it difficult to access relevant information and struggled to understand the information they found. The research indicated that without explaining traffic management and its impact on the user experience, any information currently provided is not meaningful to consumers and not taken into consideration.

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[6] Consumer Scoreboard 2011, European Commission
[7] RS Consulting, November, 2011.
[8] ICM Research, December, 2011.

Therefore, we recommend that to improve transparency practices:

- ISPs need to raise awareness of traffic management to enable consumers to evaluate and compare providers and packages in line with their needs. There is also a role to play in awareness raising by other stakeholders such as NRAs, consumer groups and comparison websites.

- ISPs need to improve the transparency of information on traffic management in particular with regard to:

  o The accessibility of information on ISPs websites, which should be provided in one dedicated area, as well as part of the broadband information package.

  o The comprehensibility

    ▪ Information should be explained and put into context, giving examples of affected services

    ▪ Information should be provided using consistent language and formats across ISPs with technical jargon avoided.

    ▪ Technical tools should be developed to help consumers select the most relevant package for their needs

- NRAs need to ensure consistent terminology and information formats on traffic management are applied across the board by both ISPs and third parties e.g.: comparison websites to reduce consumer confusion and enable consumers to make meaningful comparisons.

- NRAs need to work with ISPs and comparison websites to develop a standardised information model with regard to managed services.

The right information about Quality of Service, at the right time

Given the complexity and technicality of Internet Access Services and the aforementioned issues, consumers must receive information in a multi-layered manner.

First, contracts must include the key technical properties of the internet access and of other bundled services. This information needs to be included in a way that consumers can understand and relate to, so they are aware of the contractual obligations of ISPs have and can also know what they can expect from the access service they are contracted to.

Furthermore, it is important that consumers are given the possibility to easily access more detailed technical information if they so wish. Contracts should specify the method they should use to do so, and the information needs to be easily accessible on the ISP's website and via client customer call centres. When asking for more details on the technical information related to their internet connection, they should be able to access:

- Information regarding the minimum quality of service levels offered as well as other parameters related to the quality offered to the end-user.

- Information on any procedures implemented by the ISP to measure and shape traffic so as to avoid filling or overfilling a network link and how the procedures could impact on service quality. This information and the practices undertaken by ISPs to tackle overfilling issues should take into consideration that it is impossible for an individual to overfill a link and therefore they should not bear the consequences.

In addition, the information disclosed should also cover the following basic elements[9]:

- Traffic management practices; the reasons and the circumstances which might justify their introduction, as well as the type of traffic to be affected and the impact on internet experience including in terms of speed;

- The list of services, applications and content which cannot be accessed via the retail offers, especially for mobile networks;

- The capacity and quality of the internet connection;

- The application of 'fair usage' policies;

- Pricing information for traffic management practices, such as monthly bit cap limits and the costs for exceeding them;

- Real-time information about their consumption and notification when close to exceeding the cap;

- Any change in their traffic management policies and the impact on consumers' experiences;

- Contact details for technical support and complaint handling departments.

Secondly, the key technical information about the Internet Access Services offered also needs to be provided to consumers both before signing the contract and throughout the duration of it. The information should include easy examples to which consumers can relate and which will facilitate understanding of the implications of QoS technicalities on their Internet experience. In order to avoid misleading consumers, this information always needs to be up-to-date and easily accessible - by way of call centres, the ISP's website and so on. Therefore, we call on BEREC to ensure the guidance provided to NRAs both on transparency and QoS includes the provision of this technical information to consumers. It is important that when the information is simplified to foster understanding, there is a clear link to the more technical obligations of ISPs.

Another extremely important element relates to restrictions and/or usage limitations of specific services and applications ISPs may be applying. While we oppose such practices - unless done under legal obligation or legitimate technical

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[9] Response to the European Commission's public consultation on net neutrality, BEUC, September 2010.

necessity grounds - when such violations of the neutrality of Internet Access Services exist, they must, without exception, be clearly disclosed to consumers before the signing of the contract, during the life of the contract itself and in all advertisements related to the access service.

Furthermore, consumers also need to be informed in an understandable and accessible manner about the tools they have at their disposal which allow them to carry out their own evaluation of the access service they are paying for, without detriment to more in-depth, technical monitoring activities that NRAs should carry out themselves.

Implementing stringent Quality of Service measures

BEUC understands that ISPs' room for manoeuvre is limited to the network layer, as they are not responsible for local networks or end-point hardware and software. Also, that Quality of Service relates to end-to-end performance, thereby also depending on end-point performance. This fact makes it all the more important that Quality of Service is maximised at the network level.

The technological knowledge that consumers may have of the hardware and software necessary to connect to and use the internet properly may not in most cases be sufficient to understand the technical intricacies of the issue. Thus consumers should not be expected to be able to maximise the QoS of the end-user point.

The different measures which NRAs should include in their Quality of Service requirements should include the following at least:

- Blocking and/or throttling of applications to be prohibited – blocking and illegitimate throttling of applications are a clear violation of the principle of neutrality of the network, and therefore should not be allowed in any case.

- Congestion management required to be mainly application-agnostic – a key facet of net neutrality is that there is no discrimination between applications. Therefore, while congestion management is important for network and service maintenance, it should always be application-agnostic.

- Access performance required to be comparable to the advertised speed – consumers pay for what is advertised to them and have the legitimate expectation to receive a service which performs as close as possible to what has been advertised. Hence NRAs should determine a level of acceptability for the performance of internet access services, relative to the advertised speed, to be met by ISPs at all times.

- Qualitative requirements to be placed on performance of application-specific traffic – certain applications require specific degrees of quality of the Internet Access Service in order to function properly and match consumer expectations.

- A typical, or minimum, actual access speed to be required – a specific threshold of performance of the access connection should be established, in terms of the advertised speed. This would also serve as a disincentive for

misleading advertising and ensure full compliance with the Unfair Commercial Practices Directive.[10]

Enforcing Quality of Service measures

Determining the right QoS regulatory measures necessary to solve net neutrality violations is a positive first step, but will not be effective if there are no appropriate enforcement mechanisms in place to ensure ISPs are following the QoS measures imposed on them.

Regarding BEREC's distinction between a reactive and a proactive regulatory approach, we recommend that NRAs take a proactive role in monitoring network activity on a continuous basis to assess the quality of the access services being offered in their markets. In order to do so, we believe it is a good idea for NRAs to use their own quality monitoring tools such as test servers placed inside ISPs' networks. Rather than only requesting ISPs to voluntarily disclose their activities, test servers would allow NRAs to acquire a more accurate understanding of the traffic management techniques and other activities undergone by ISPs at all times.

NRAs should be responsible for providing equipment to end-users so that they can measure the quality of their service at the end point. This equipment could be either hardware or software-based, but it is important that NRAs are responsible for it in order to avoid conflicts of interests with the ISPs providing the access services. Consumers participating in such testing activities should not bear the cost of the necessary equipment.

Additionally, all monitoring information should be disclosed to consumers in an understandable manner. We recommend that NRAs publish updated reports of the national situation related to QoS and net neutrality. Furthermore, QoS requirements should ask ISPs to similarly disclose the results of the monitoring activities on their networks so that consumers will be able, if they so wish, to get a clear understanding of the degree of adequacy of the service being delivered to them.

Specialised Services vs. internet access

As stated above, specialised services should never be allowed to affect the Quality of Service end-users receive when they subscribe to an internet access service. Further regulatory certainty on the relationship between the two commercial activities may be necessary, in order to ensure internet access services are receiving the maximum QoS they can in a 'best-effort' internet.

If this is not done, we fear that the Scenario A: 'The dirt road internet' described in BEREC's draft guidelines is not only possible, but probable. In such a scenario, ISPs are allowed to continue to increase their traffic resources to their specialised services to the detriment of their Internet Access Services. If such a market tendency is allowed to continue, internet applications and services will increasingly display very low network performance.

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[10] Directive 2005/29/EC concerning unfair business-to-consumer commercial practices in the internal market.

This scenario is also worrying due to the fact an increase in specialised services to the detriment of Internet Access Services may result in less competition on these. It is of utmost importance that the general public, and in particular more economically disadvantaged consumers, are able to subscribe to a neutral broadband access to the public internet at an affordable price and with good Quality of Service standards.

Quality of Experience vs. Quality of Service

BEREC defines QoS as a "*measure of the performance of a set of functions observable at the user-interface of the service*". Quality of Experience (QoE) goes a step further and considers QoS in addition to user expectation and context.[11] Taking into consideration the definitions of Quality of Experience and QoS used by BEREC, it is important to point out that both are relevant in the context of re-establishing the neutrality of the internet in Europe. Imposing stringent QoS measures is a good step in the right direction, in order to prompt ISPs to stop discriminatory activity they may be engaged in.

Among other things, the internet experience for consumers is one of expectation. As stated above, consumers expect to be able to access any content or service of their choice, using any device or application they wish to. Therefore, expectations are also a key indicator of the performance of an ISP's services. As a result, it is important to look deeper into Quality of Experience measurements which will include these other important parameters. Understanding the expectations of consumers is important in analysing the impact that a higher or lower QoS may have on their satisfaction with a service.

In fact, because consumer expectations are paramount in defining which obligations and requirements should be imposed on ISPs and the connection services they offer, standard Quality of Experience targets should be defined first and only then deduce from them all necessary QoS parameters necessary to match and enforce these standards.

The process to define Quality of Experience targets and requirements should involve national consumer authorities as well as NRAs. Furthermore, consumer associations have significant experience deploying surveys, analysing consumer behaviour and using the required tools to determine consumer expectations of products and services. Therefore they can be instrumental in any regulatory work to set Quality of Experience targets.

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[11] "A Framework for Quality of Service in the scope of Net Neutrality", BEREC BoR (11) 53, 8 December 2011