

15 December 2015



Written response to BEREC stakeholder dialogue with representatives of end-users/consumers and civil society

Co-drafted by



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Introduction

The decision of the European legislators to leave so much of the detail of the Regulation up to the interpretation of Body of European Regulators of Electronic Communications (BEREC) represents a big institutional step forward for the organisation. Over the course of the next months, the eyes of the world will be on BEREC, to assess whether it can surpass the United States Federal Communications Commission (FCC) as the body that set a global standard for protecting the open, democratic, competitive, innovative Internet.

As a first step, we hope to engage with BEREC and national regulators not only today, but continuously during the coming months and future occasions. We hope there will be more stakeholder meetings; inclusive and constructive meetings where not only civil society will be present, but also other stakeholders. We think it is essential that BEREC hold an open consultation early in the process to gather input from a broader range of stakeholders before drafting starts and before the final implementation guidelines are adopted. We therefore recommend BEREC hold the consultation in Spring 2016. Failing this, some form of pre-consultation or publication of guidelines methodology is needed to facilitate meaningful engagement by civil society in this process.

As a second step, it will be important for BEREC to be clear about the task at hand, with reference to the objectives of the legislators, as defined both by the legislative history and the stated goals of the instrument. The goal of the Regulation is to ensure that the four main topics addressed today do not undermine the good principles the Regulation has set forth. Furthermore, it should be remembered that the Regulation needs to be understood, unlike many telecoms regulations, in the context of EU primary law. This means that it cannot be interpreted in a way that is inconsistent with the Charter of Fundamental Rights. This includes Article 11 of the Charter, which covers not just the freedom to receive information, but also the freedom to seek and impart information¹; Article 16 of the Charter about the Freedom to conduct business whose "main aim is to safeguard the right of each person in the EU to pursue a business without being subject to either discrimination or disproportionate restrictions"²; and Article 15(2) of the Charter, which establishes that every EU citizen has the right "to provide services in any Member State".

Clarity on fundamental rights issues is also essential in order to minimise the number of court cases related to Regulation (EU) [2015/2120](#)³ in the upcoming years.

1 ARD & ZDF: Positionspapier von ARD und ZDF zur Sicherung von Netz-neutralität durch ein offenes Internet und zur Einführung von Diensteklassen, 2013, http://www.ard.de/download/397992/ARD_und_ZDF_zur_Sicherung_von_Netzneutralitaet_durch_ein_offenes_Internet.pdf

2 European Union Agency for Fundamental Rights (FRA): European Union Agency for Fundamental Rights: Freedom to conduct a business: exploring the dimensions of a fundamental right, 2015, http://fra.europa.eu/sites/default/files/fra_uploads/fra-2015-freedom-conduct-business_en.pdf – Page 21.

3 REGULATION (EU) 2015/2120 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL: laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No. 531/2012 on roaming on public mobile communications networks within the Union, 25 November 2015, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R2120> (the "Regulation").

EDRi position on the questions asked by BEREC

TOPIC 1 – TRAFFIC MANAGEMENT FOR INTERNET ACCESS SERVICES (IAS)

a) “Categories of traffic” and similar terms

Q: What is your understanding or view on the terms “specific categories of traffic” and “specific content, applications or services, or specific categories thereof” in Article 3(3) subparas 2 and 3?

The term “content, applications, or services” is ambiguous. It can be understood either to denote a type of content, application or service (e.g., world wide web, e-mail, Internet telephony) or a specific instance of a specific type of content, application or service (e.g. the website of the Guardian, Gmail, or Skype).

We understand the term “specific content, applications, or services” as referring to one or more instances of a specific type of content, application, or service – in the examples above, to, for example, the website of the Guardian newspaper, Gmail, or Skype. Thus, an Internet Service Provider (ISP) discriminates between “specific content, applications, or services,” if it treats some content, applications, or services in a class of similar content, applications, or services differently from the other applications in that class. For example, an ISP discriminates between “specific content, applications, or services” if it throttles only some streaming video applications (e.g., Netflix and YouTube), but not others (e.g., HBO Go), or if it slows down one specific online telephony application (e.g., Skype), but not others (e.g., WhatsApp’s Internet telephony application).

By contrast, an ISP who discriminates against a “specific category” of content, applications, or services, discriminates against all content, applications, or services in that category without differentiating among different applications in that category. The term “category” must be read broadly to include any group of individual content, applications, or services that share some common characteristics.⁴ For example, a category could be based on application-type (e.g., all e-mail applications, or all online telephony applications), the transport-layer or application-layer protocol used by the applications (e.g., all applications using the TCP protocol), or technical characteristics of the application (e.g., all delay-sensitive applications). Therefore, an ISP would discriminate against a specific category of applications if it treated all e-mail applications differently from other kinds of applications, or if it treated all delay-sensitive applications differently from applications that are not sensitive to delay.

Thus, by prohibiting ISPs from interfering with, degrading or discriminating between “specific content, applications, or services, or specific categories thereof”, Art. 3(3), subparagraph 3 of the Regulation requires traffic management to be application-agnostic unless one of the exceptions applies⁵.

4 [For a similar use of the term „class of applications,“ see Barbara van Schewick, Network Neutrality and Quality of Service, Stanford Law Review Volume 67, Issue 1, January 2015, pp. 104-105, Box 13 and pp. 125, URL: http://www.stanfordlawreview.org/print/article/network-neutrality-and-quality-of-service.](http://www.stanfordlawreview.org/print/article/network-neutrality-and-quality-of-service)

Requiring network management to be as application-agnostic as possible is a good policy.⁶ This protects the interests of end users and application providers, while allowing ISPs to manage their networks. The FCC has required network management to be as application-agnostic as possible since its order against Comcast in 2008; the Canadian regulatory agency CRTC has required the same since 2009.

Finally, a narrow reading of this term is backed up by the final sentence in Recital 7 of the Regulation. The essence of end user rights, which includes the freedom to impart information, is mentioned separately from the reference to Internet access providers and providers of content, applications and services.

b) Reasonable traffic management (TM)

Q: In your view, how can day-to-day “reasonable” TM measures performed by ISPs in accordance with Article 3(3) subpara. 2, such as TM for “specific categories of traffic”, affect the end user’s choice? It would be helpful if you can provide concrete examples.

Any traffic management measure needs to respect the principles of the Regulation. In particular, it should not undermine the essence of the rights of end-users or the freedom to conduct business. This means that:

- the right to respect for private life and communications
- the right to seek, receive and impart information and
- the right to conduct a business

must all be respected.

In addition, Article 3(3), subpara. 2 establishes that any traffic management must be temporary and, therefore, not a standard part of network configuration. Recital 9 is also clear that “such measures should not be maintained for longer than necessary.”

Furthermore, Article 3(3), subpara. 2 establishes that traffic management may only be used when it is not implemented on the basis of “commercial considerations”, but on “objectively different technical quality service requirements of traffic”. Maintaining a network where such “traffic management” is always *de facto* “necessary” could also be considered to be a “commercial consideration”.

In this sense, Article 3(3), subpara. 2 does not generally allow ISPs to implement TM measures that treat specific categories of traffic differently from other categories of traffic. This means that, as a general rule, Article 3(3), subpara. 2 only allows application-agnostic network.

5 BEREC: Guidelines for quality of service in the scope of net neutrality, 26 November 2012, http://berec.europa.eu/files/news/bor_12_32_guidelines.pdf - Definition of application-agnostic on pages 30-31.

Federal Communications Commission: Report and Order on Remand, Declaratory Ruling, and Order, 12 March 2015, https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-24A1.pdf - Definition of application-agnostic in footnote 344 on page 63.

6 [Barbara van Schewick, Network Neutrality and Quality of Service, Stanford Law Review Volume 67, Issue 1, January 2015, pp. 124-133, 137-140; Barbara van Schewick, The Case for Meaningful Network Neutrality, February 20, 2015, pp. 4-11.](#)

Under very limited circumstances, Article 3(3), subpara. 3 allows ISPs to adopt measures that differentiate among categories of traffic based on “objectively different technical quality of service requirements of specific categories of traffic,” but only if:

- this is necessary to improve the overall quality and user experience – but often, class-based traffic management will harm the user experience, so this requirement will not normally be met;
- this goal cannot be met in an application-agnostic way – but at least in fixed networks, application-agnostic TM measures (including user-controlled, user-paid quality of service) will be able to achieve the same goal, but in a way that is less harmful to innovation and user choice); and
- the measures are not maintained longer than necessary.

In a nutshell, Article 3(3), subpara. 3 establishes a three-level hierarchy from less to more intrusive TM practices that always have to be considered from the perspective of proportionality.

A measure is not proportionate if a less burdensome measure exists. As Recitals 1 and 3 make clear, the goal of the Regulation is to “protect end users and the continued functioning of the Internet ecosystem as an engine of innovation.” The principle of proportionality needs to be applied in light of these goals. In practice, this means that a measure is not proportionate if there is an alternative measure that is less burdensome for users and innovation in content, applications and services.

Thus, using TM measures that differentiate between objectively different categories of traffic to optimise the overall transmission quality and user experience is neither proportionate nor necessary (Recital 9: “Such measures should not be maintained for longer than necessary.”), if it is possible to reach these goals in an application-agnostic way. In any case, the limitation that such measures may not be maintained for longer than necessary makes the legislator’s intention clear – namely that they may not be an integral part of network design.

Finally, Recital 9 only seems to allow TM measures that differentiate among objectively different classes of traffic if these measures are used to “optimize overall quality and user experience” (and if they are necessary and proportionate to reach that goal.) The various negative consequences of such measures for users, described above, suggest that such measures will often fail to meet that goal. Regulators must therefore be ready to intervene in a timely and meaningful fashion in such circumstances.

Congestion Management

The experience in the US (since 2007) and Canada (since 2009) suggests that it is possible to provide users with a high quality experience using application-agnostic congestion management measures in fixed networks without differentiating among objectively different classes of traffic⁷. As a result, congestion-management measures that differentiate among objectively different classes of traffic are unlikely to be proportionate and necessary under Art. 3(3), subpara.2 or 3. Mobile networks pose specific challenges, so some measures that might not be proportionate for a fixed network might be proportionate for a mobile network. Still, studies suggest that

⁷ Barbara van Schewick: The Case for Meaningful Network Neutrality Rules, Report submitted to FCC as attachment to *ex parte* letter dated 20 February 2015, page 10; Barbara van Schewick: Network Neutrality and Quality of Service, Stanford Law Review Volume 67, Issue 1, January 2015, page 139, quoting Comcast, the largest ISP in the US.

application-agnostic TM measures are sufficient in a broader range of scenarios than is often assumed⁸.

As a result, we would urge extreme caution on this point, to avoid unintended consequences for network investment and the openness of the online economy. This is in line with existing BEREC principles. As BEREC has stated, "ISPs should not be able to claim the use of congestion management as a reason to degrade a specific application if application-agnostic methods can be used instead."⁹

Quality of Service

Similarly, since Quality of Service can be offered in an application-agnostic way, it is neither necessary nor proportionate to allow ISPs to determine which classes of traffic should get which type of service based on the objective technical requirements of the different classes of services. In particular, user-controlled, user-funded Quality of Service as defined below is less harmful for innovation and user choice and, therefore, more proportionate, than allowing ISPs to determine which classes of traffic should get which type of service.

This applies to user-controlled, user-paid Quality of Service that meets the following conditions:

- (1) the different classes of service are available equally to all applications and classes of applications;
- (2) the user is able to choose whether, when, and for which application to use which class of service; and
- (3) the ISP is allowed to charge only its own Internet service customers for the use of the different classes of service.

This was the only kind of Quality of Service that the FCC allowed in its 2010 Open Internet Order. BEREC also recognised the application-agnostic nature of these kinds of Quality of Service in its 2012 Guidelines.¹⁰

In light of the above, we argue that all-classed TM is likely to harm competition, roll-out of new services, privacy, innovation, individual users and regulators.

8 New America Foundation's Open Technology Institute: "Re: Protecting and Promoting the Open Internet, GN Docket Nos. 14-28, 10-127" (*ex parte* letter filed with the Federal Communications Commission), 13 November 2014,

https://www.newamerica.org/downloads/ExParte_OTI_FilingCTCstudy_111314.pdf

CTC Technology and Energy: Mobile Networks Can Manage Congestion While Abiding by Open Internet Principles, November 2014, https://static.newamerica.org/attachments/188-mobile-broadband-networks-can-manage-congestion-while-abiding-by-open-internet-principles/OTI_CTC_Wireless_Network_Neutrality_Engineering_Study_FINAL_111314.pdf

9 *bid*, page 51.

10 BEREC, Guidelines for quality of service in the scope of net neutrality, 26 November 2012, http://berec.europa.eu/files/news/bor_12_32_guidelines.pdf - Pages 29-30, 49-51.

Allowing ISPs to treat categories differently should not result in them deliberately distorting competition¹¹

If ISPs are free to define classes of applications, this leads to the risk that they will use this to discriminate against specific applications. It could be the case that an ISP offers low delay to gaming applications in order to appeal to potential gamers. But the ISP can also decide not to offer low delay to the class of Internet telephony applications, because these services compete with the ISPs' own telephony offering. Regardless of the sensitivity to delay both services, the flexibility in the text might lead ISPs to argue that there are technical differences which justify discrimination.

This leaves the regulator with the task of making a ruling on the basis of an assumption of the motivations of the provider. Any such determination by the regulator would be subject to legal challenge by the operator, leading to dissuasive costs for the NRA and delays in remedying the social and market problems caused by the provider's discrimination.

Class-based traffic management risks creating unintended damage to specific applications

Even in the absence of any intent on the part of ISPs, it is possible that traffic management technologies that distinguish between categories of applications can discriminate against certain applications, thereby undermining competition.

One well-known example of this is the throttling of peer-to-peer file sharing applications in response to network congestion. The defence for this behaviour is that such applications are not sensitive to delay. However, this causes major problems for online gaming, for example. Deep packet inspection (DPI) is used to try to identify such traffic, with significant privacy impacts, whose proportionality is unclear, particularly as it has proven very difficult to draw the line between gaming and file-sharing. As a result, online games either stop working completely or do not work properly. Standing committees involving stakeholders were set up in the UK in order to minimise the damage caused.

Such restrictions also impact innovation - any individual or company that would seek to create a new feature or service that relies on peer-to-peer data exchange needs to find the resources to work with ISPs and associated vendors in order to avoid being caught by this "non-discriminatory" traffic management. One of the biggest assets of the Internet as a space for communication and service provision is the "innovation without permission" principle, which is undermined by such problems.

A very similar, but even broader, problem was encountered in Canada, where DPI was used to throttle peer-to-peer traffic. In that case, a video streaming service called "Vuze", which also used peer-to-peer protocol, was restricted. In this case, a particularly time-sensitive service was brought to its knees by an apparently reasonable assumption that the protocol it used was particularly resistant to delays.

11 [On the following six subsections, see Barbara van Schewick, Europe is about to adopt bad net neutrality rules. Here's how to fix them, Medium, October 21, URL:https://medium.com/@schewick/europe-is-about-to-adopt-bad-net-neutrality-rules-here-s-how-to-fix-them-bbfa4d5df0c8#.cpgb6q6gh.](https://medium.com/@schewick/europe-is-about-to-adopt-bad-net-neutrality-rules-here-s-how-to-fix-them-bbfa4d5df0c8#.cpgb6q6gh) [On the problems with class-based traffic management measures, see also Barbara van Schewick, Network Neutrality and Quality of Service, Stanford Law Review Volume 67, Issue 1, January 2015, pp. 105-124.](#)

Traffic management of different classes of traffic risks discriminating against encrypted traffic

It is important to stress that encrypted traffic cannot reasonably be considered a category of "content, application or service". ANY content and practically any application or service can be inside an encrypted data stream. An ISP cannot *know* what the technical characteristics of the transmitted content, application or service are, even if it might be able to make a reasonable guess in relation to data from dominant/significant online sources (who would be able to be treated on the basis of their probable content).

Different categories of traffic are treated differently, based on what the provider knows - or believes that it knows - about the needs of the traffic in question. However, when traffic is encrypted, all the ISP knows is where the data comes from and that it is encrypted. The most likely response from ISPs will therefore be to put the data in the slow-lane, unless the data comes from a source that allows it to guess that it is, for example, video traffic. This creates two problems. Firstly, it creates an obvious barrier for new time-sensitive and encrypted services, as their service will not work unless they are permitted to be treated differently from other encrypted data. Secondly, it creates a disincentive to use encryption, which is used for a variety of valid reasons, such as to protect privacy, secure sensitive financial transactions, protect trade secrets or guard against surveillance.

Therefore, all application-specific forms of TM are not applicable to encrypted data traffic under the TSM regulation and only application-agnostic TM measures can be applied to such traffic.

Class-based traffic management stifles innovation and creates uncertainty

If different categories of data are treated differently and different ISPs have different approaches, it means that innovators cannot be certain if their new services will be able to get through to all users. Assuming good-will on the part of ISPs, it would still be necessary to contact all access providers and for all the providers to adjust their services for innovations that may not yet even have any users. If we assume that not all ISPs will act in good faith (and even if we assume that they will), we return to the problem that "innovation without permission" is undermined, as stated above.

Ultimately, this restriction on innovation and rollout of new services undermine user choice, undermining the fundamental rights of both innovators and users.

Class-based traffic management can harm individual users

TM measures that treat specific categories of traffic differently can harm end users' choice in various ways, even if the categories are based on the objectively different technical quality of service requirements of the traffic. The outcome would still be that ISPs are still allowed to give some applications an advantage over others. This, by definition will result in some users and some traffic becoming winners and some becoming losers, on the basis of the ISP's decisions.

On the other hand, treating different categories of data differently undermines the right of the user to use their connection according to their changing needs. The same user will, at different times need a low-delay service from Skype, less quality when talking to a friend, top quality when doing a job interview. Sometimes a file upload will not need particularly high speed or

quality, however uploading a homework assignment, a response to a call for tenders or a newspaper article will be very time critical. The question is - who knows best? Should the individual be put in charge of their own connection or should the provider make "one-size-fits-all" guesses about how the service should be used? Guesses, being guesses, will never be 100% correct, leading to inevitable harms for individual users.

Class-based traffic creates regulatory overload

The "gaming" of regulatory processes is a very familiar phenomenon. If ISPs define categories of traffic in a discriminatory way, then regulators need to investigate, make decisions and, ultimately, defend them in court. It is not always certain that an NRA will have the human and financial resources to take cases against large, established access providers, in order to defend the rights of start-ups that may or may not survive until their legal rights have been upheld in a judicial process.

c) TM going beyond reasonable TM

Q: In your view, how can TM measures "going beyond reasonable" TM performed by ISPs in accordance with Article 3(3) subpara. 3, e.g. "congestion management", affect the end user's choice? It would be helpful if you can provide concrete examples.

Any kind of class-based network management creates the problems discussed under question 1 (b). Allowing ISPs to distinguish between categories of application using criteria other than objectively different quality of service requirements exacerbates these problems, since it gives ISPs additional flexibility in defining classes of applications in a way that deliberately or inadvertently harms users and distorts competition among applications or classes of applications.¹²

Art. 3(3), subpara. 3 also establishes a hierarchy of traffic management measures. While letter (c) allows TM measures that differentiate among categories of traffic "provided that equivalent categories of traffic are treated equally" "to prevent impending congestion and mitigate the effects of exceptional or temporary network congestion," the subparagraph only allows these measures "as necessary, and only for as long as necessary." In addition, according to Recital 11, "those exceptions should be subject to strict interpretation and proportionality requirements."

Thus, even if exceptional or temporary congestion is present, ISPs generally need to deal with this congestion in an application-agnostic way. As long as that is possible, differentiating among classes of traffic is neither necessary nor proportionate.

If the congestion cannot be managed in an application-agnostic way, ISPs can differentiate among categories of traffic. Here, differentiation among categories of traffic using objectively

12 For examples, see Barbara van Schewick: Network Neutrality and Quality of Service, Stanford Law Review Volume 67, Issue 1, January 2015, <http://www.stanfordlawreview.org/print/article/network-neutrality-and-quality-of-service> - Pages 105-124.

different technical quality of service requirements of the different classes of traffic is less intrusive than differentiating among categories of traffic using other criteria. Thus, as long as exceptional or temporary congestion can be management based on objectively different quality of service requirements, it would not be necessary and proportionate to differentiate based on other criteria.

Only if discriminating based on objectively different requirements is not sufficient to mitigate the effects of exceptional or temporary congestion, would it be permissible to differentiate based on other criteria. However, in those cases, the principle of proportionality requires that the classes are chosen to minimise harm to users, innovation, and competition.

The proportionality language, interpreted in light of the goals of the regulation, requires BEREC to require that traffic management measures intrude on user choice and innovation as little as possible.

Finally, while exception (c) of Art. 3(3), subpara. 3 allows ISPs to act to prevent impending congestion, this only applies to preventing cases of exceptional or temporary congestion. Existing or impending congestion that is neither temporary nor exceptional can only be dealt with under Art. 3(3), subpara. 2. The carefully calibrated system of safeguards in Recital 15 that is clearly defined to limit the applicability of exception (c) to cases of temporary or exceptional congestion would be void of meaning if ISPs could use the measures in exception (c) to prevent any kind of congestion, even if it was neither temporary nor exceptional.

TOPIC 2 – SPECIALISED SERVICES (SPS) VS. IAS

a) SpS and necessity to meet requirements for a specific level of quality

Q: Article 3(5) subpara. 1 refers to providing SpS where “the optimisation is necessary in order to meet requirements ... for a specific level of quality”. What could be the reason for implementing or offering SpS? In your view, are SpS necessary for offering existing or new services?

To respect the object and purpose of the Regulation, the main goal of every measure taken regarding SpS has to be the prevention of the reclassification of existing online services or applications as SpS.

All legitimate optimisations for services other than Internet Access Service (IAS) have to be "necessary in order to meet the requirements of the content, applications or services for a specific level of quality" and therefore cannot be undertaken for content, applications or services available without such optimisation over IAS. Otherwise, these “fast-lanes” undermine the stated object and purpose of the Regulation, circumvent all net neutrality safeguards and establish a two-sided market with high innovation costs, a gatekeeper functionality for ISPs and negative network investment incentives for IAS. Deutsche Telekom's public plans to coerce start-ups into classifying themselves as "specialised services" and demand payments in the form of revenue-sharing¹³ is a very clear indication of what must be avoided, if the Regulation is to have any real meaning.

13 Euractiv.com: Deutsche Telekom chief causes uproar over net neutrality, 30 October 2015, <http://www.euractiv.com/sections/digital/deutsche-telekom-chief-causes-uproar-over-net-neutrality-319028>

SpS shall only be legitimate when the service or application provided offers a functionality whose technically cannot be operated on an uncongested IAS. SpS can therefore only be necessary for services which cannot be made available via IAS.

Recital 1 defines the aim of the Regulation as being the guarantee of "the continued functioning of the Internet ecosystem as an engine of innovation". Therefore, the focus has to be the protection of the open Internet and its ability to drive economic growth, innovation and cultural diversity. The innovative potential of SpS on the other hand has at no point ever been proven or underpinned with examples. If this innovative potential exists, it has to be located in the realm of services which are technically not possible via uncongested IAS.

The European Commission has argued that giving preferential treatment to certain services for a price is not a problem for the Internet ecosystem as a whole as long as the basic IAS quality does not deteriorate¹⁴. However, problems are caused by the very existence of a fast-lane, not the quality of the slow-lane. Every competitive advantage on the network changes the market situation in the online economy from a level playing field to a distorted environment with gatekeepers that demand "a few percent revenue" from start-ups or public entities in order to allow them to offer a service that is not at a competitive disadvantage.

If the slow lane is good enough, some have argued, those who cannot pay can still get to their users and have a chance to compete. However, as stated above, "it's not the quality of the slow lane that is the problem; it's that there IS a faster lane that provides a better experience. According to research, increasing load times by as little as 100 milliseconds reduces the amount of time people spend on a site, how much they buy, and whether they come back."¹⁵

b) SpS vs. content and applications provided over IAS

Q: Are you aware of a demand for SpS from end users (including business users)? In your opinion, could content and applications provided on the IAS become a kind of SpS? How should this be assessed under the TSM regulation?

No, we are not aware of such a demand. Furthermore, such a reclassification would unquestionably not be legal under the TSM. If content, applications or services can be made available on the open Internet, the optimisation is not necessary for them and therefore cannot be legitimate SpS under Article 3(5) of the Regulation.

TSM offers five safeguards for the provisioning of SpS, all of which aim at preventing the reclassification of existing online services as SpS. These safeguards give specific meaning to the overarching requirement in Article 3(5) of the Regulation that the SpS is "necessary in order to meet the requirements of the content, applications or services":

1. SpS cannot be used to circumvent provisions regarding TM measures applicable to Internet Access Services (IAS) by just giving them priority over comparable content, applications or services available via IAS;

14 European Commission: Statement on Net Neutrality, 30 October 2015, https://ec.europa.eu/commission/2014-2019/oettinger/announcements/statement-net-neutrality_en

European Commission: Pressestatement zur Netzneutralität, 30 October 2015, https://ec.europa.eu/commission/2014-2019/oettinger/announcements/pressestatement-zur-netzneutralitat_en

15 Barbara van Schewick: The Case for Meaningful Network Neutrality Rules, 19 February 2015, <http://apps.fcc.gov/ecfs/document/view?id=60001032169> - Page 13.

2. SpS have to be optimised to assure specific quality of service requirements of the content, application or service, which are necessary for key functionality of the content, application or service;
3. SpS shall not be usable or offered as a replacement for IAS;
4. SpS can only be offered if sufficient network capacity is available to offer them in addition to any IAS provided;
5. Provision of SpS cannot be to the detriment of the availability or general quality of IAS.

Article 5(1) and Recital 16 of the Regulation require NRAs to verify whether SpS fulfil these requirements. If BEREC provides specific guidelines for this verification process, criteria 1 to 4 have to be assessed *ex-ante* in order to ensure their compliance both with these criteria and with Recital 1's requirement to "guarantee the continued functioning of the Internet ecosystem as an engine of innovation". A further *ex-post* evaluation may be necessary to ensure compliance with criterion 5, which requires continued monitoring of the availability and quality of IAS as well as criteria 1 and 3, which require continued monitoring of the market situation. Every regulatory decision has to take into account that the damage for innovation and competition caused by SpS can only be prevented by *ex-ante* procedures. Very clear guidance from BEREC is needed here, to reduce the risk of long court procedures being used by access providers as a tool to prevent regulatory decisions being made or to delay them long enough to achieve specific market goals.

There is very little evidence that there is demand for SpS on the side of individual end users or business users. No specific products or innovations have been provided up by car manufacturers, providers of medical services or other industrial innovators in the debate as examples of innovations that were or could be stifled by net neutrality regulation nor which would have been excluded by a narrow SpS definition. Indeed, the European Commission was, in response to Parliamentary question [E-4461/2015](#)¹⁶ unable to provide even a single example of such a demand, a full eighteen months after making the assertion that such demand exists. The European Emergency Service Association has been unequivocal in that, even for emergency calls, no restriction of the open Internet is needed.

BEREC defined and named SpS so as to distinguish them from managed services and to highlight their separation from content and applications provided via IAS. Preventing the reclassification of online services as SpS has to be the main objective to prevent the circumvention of the non-discrimination principle of net neutrality in the open Internet.

There is demand on the side of all content application and service provider (CAPs), particularly on the side of European SMEs¹⁷, journalists¹⁸, public broadcasters¹⁹, universities, government

16 European Parliament: Parliamentary question by Julia Reda (Verts/ALE): Subject: Net neutrality, telemedicine and intelligent transportation systems, 19 March 2015, <http://www.europarl.europa.eu/sides/getDoc.do?type=WQ&reference=E-2015-004461&format=XML&language=EN>

17 Multiple Tech Companies: Open Letter to President Schulz and members of the European Parliament, 25 October 2015, <https://cyberlaw.stanford.edu/files/publication/files/TechLettertoEUOct.2015%20%281%29.pdf>

18 Deutscher Journalisten-Verband: Netzneutralität erhalten!, 26 October 2015, <http://www.djv.de/startseite/profil/der-djv/pressebereich-download/pressemitteilungen/detail/article/netzneutralitaet-erhalten.html>

19 Gemeinsame Erklärung der Gremienvorsitzendenkonferenzen von Landesmedienanstalten und ARD: Netzneutralität sichern – Plattformregulierung modernisieren, 22 October 2015, <https://www.lfm-nrw.de/service/pressemitteilungen/pressemitteilungen-2015/2015/oktober/netzneutralitaet-sichern-plattformregulierung-modernisieren.html>

agencies and low-cost speakers to offer their competitive services without entering into SpS agreements with every ISP whose customers their service might want to reach. One example are the online courses of public universities. This content should not be delivered in a quality poorer than the current state of technology (4K video) and those institutions do not have the budget to enter into SpS agreements with every ISP that one of their students (particularly abroad) might use to access their content.

If new services that demand a quality that is currently not offered in - and cannot be offered over - the IAS can exclusively be offered via SpS, the bandwidth expansions on those types of access services offer a higher incentive for ISPs. The minimum quality of service requirements of Article 5(1) would then have to be adapted to deal with this negative incentive to reflect technological advances in IAS quality, which leads to higher regulatory burden.

Q: If they were allowed, would you see demand for, or benefit to, end users from the provision of sub-Internet offers (i.e. offers where the access to Internet is restricted to a limited set of content and applications)? How should think such offers should be assessed under the TSM regulation?

Sub-Internet offers are not possible under the TSM regulation. Access services fall under one of two categories. An access service is either under the scope of the definition of IAS in Article 2(2), in which case it has to provide “connectivity to virtually all end points of the Internet” and thereby falls under the protection of Article 3 against blocking; or, alternatively, an access service has to be treated as “services other than internet access services” under Article 3(5). In the latter case, the content, application or service being accessed has to require optimisation that is necessary to meet requirements and not just simply giving priority over comparable content, application or services available via IAS.

Article 3(5) further states that such “other services” cannot be “usable or offered as a replacement for internet access services,” which would clearly be the case with any restricted sub-Internet offer targeted at specific user groups.

In addition, sub-Internet offerings require the ISP to actively block or restrict specific content and applications, which violates Article 3 (1).

Finally, we see no obvious benefit from this practice for the end-user, whose choice is restricted, nor the market players, whose level playing field gets heavily distorted. Offering sub-Internet has potentially huge negative social consequences as many low-income users will be restricted by this practice in their freedom of speech and their participation in the European society and single market.

c) SpS effect on innovation and openness of the Internet

Q: Do you have a view on the impact of the possibility to provide SpS on future innovation and the openness of the Internet? Do you see any issues arising with the provision of SpS to end users?

The entire history of the Internet shows that innovation happens in the best effort Internet and that, therefore, the protection of this engine for innovation needs to be BEREC's top priority. In the open Internet, innovation is cheap because every invention can utilise a global, neutral

infrastructure which follows a modular and layered architecture without having to ask permission or seek a business deal with every ISP whose customers the service wants to reach.

We know that large access providers are seeking to make access to their customer base into a new monopoly. We know that this would be anathema to innovation and competition. Giving preferential treatment to a service gives it a huge competitive advantage over comparable services. Larger Internet providers wish to create and monetise privileged access to their customers and thereby exercise a gatekeeper functionality, restricting freedom of speech, competition and innovation. The vertical integration between access services and CAPs will lead to the consolidation of both markets which will have a disproportionately negative effect on European start-up innovation.

As overwhelming evidence of the FCC's open Internet proceedings shows, the low costs of innovation have been central to start-up innovation online. Most start-ups would not be able to pay for preferential treatment, and venture capitalists would not be able to provide the necessary funds. As a result, allowing companies to pay for preferential treatment as a SpS would make it impossible for start-ups to compete²⁰.

TOPIC 3 – IAS QUALITY AND IMPLICATIONS

a) Transparency regarding traffic management

Q: What information would be beneficial for end users so that they are better informed, e.g. regarding traffic management measures, commercial and technical conditions and their impact on Internet access services? How should this information be communicated to them in the contract? (Ref. Article 4(1))

Information about traffic management practices has to be provided online following the principles of open data²¹. The information has to be offered with sufficient granularity and in such a standardised form that third parties are able to compare offerings on independent platforms (such as price comparison websites).

Macroscopic information about the general behaviour of an ISP in its network might not be relevant a user can know if a service or application offering poor quality is unusable due to traffic management (TM) practices, interconnection disputes or problems on the side of the content application and service provider (CAP).

Such information should contain the relative number of packets which have been delayed or dropped because of traffic management, broken down by time of day and classes of traffic if applicable. This aggregate information should be publicly available on a website in (nearly) real time, so that individual users can assess whether their current Internet activity is likely to be affected by traffic management, and so that customers can compare traffic management practices of competing ISPs.

However, it is very important to stress that transparency cannot, as proposed by the

20 Barbara van Schewick: The Case for Meaningful Network Neutrality Rules, 19 February 2015 - <http://apps.fcc.gov/ecfs/document/view?id=60001032169> - Pages 10-14.

21 Opendefinition.org : Open Definition 2.1, 26 October 2015, <http://opendefinition.org/od/2.1/en/>

Commission in its initial draft of the Regulation and subsequently rejected, be considered to be an antidote to anti-competitive behaviour in itself. Transparency has limited scope to fix problems, particularly in this context.

b) IAS quality – speed

Q: How should ISPs describe and communicate speed of their IAS offers in the case of fixed and mobile networks? How should the different IAS speed parameters (e.g. minimum, maximum, advertised and normally available speeds in the case of fixed networks and estimated maximum and advertised speeds in the case of mobile) be defined in the contract? (Ref. Article 4(1)(d))

How this is done is less important than the need for the speeds to be verifiable, consistent and comparable, as acknowledged by BEREC in its 2011 Guidelines on transparency in the scope of net neutrality.²²

c) IAS quality – other parameters

Q: How should ISPs describe other parameters of their IAS offers, such as quality of service parameters (typically latency, jitter, packet loss) and quality as perceived by end users? Should these parameters be defined in the contract? If so, how?

Latency, jitter and packet loss parameters should be described in the contract in order to allow users to compare different offerings and choose the Internet offering which best meets their needs. For example, a gamer might choose an IAS which offers low latency or someone who uses online telephony for work might choose an IAS with low latency and low jitter. Therefore, such parameters are essential for efficient competition.

TOPIC 4 – COMMERCIAL PRACTICES/ZERO-RATING AND MISC.

a) Commercial practices applied to the IAS offers

Q: What is your understanding of the term “commercial practices” (Ref. Article 3(2))? Do you think there is a demand for “commercial practices” such as zero-rating, from the end users’ point of view?

The regulation does not cover zero-rating

The term “commercial practices” appears to possibly refer to interconnection practices between ISPs and CAPs. There have been many cases in the past where disputes over inter-connection (peering disputes) between those parties had a negative impact on the right of end-users under Article 3(1), in the form of deteriorated service quality below the acceptable threshold of the functionality of the service. We therefore understand the text in a way which gives NRAs the power to intervene in such inter-connection disputes when they, “by reason of their scale, lead

22 BEREC: Guidelines on Transparency in the scope of Net Neutrality: Best practices and recommended approaches, December 2011, http://berec.europa.eu/doc/berec/bor/bor11_67_transparencyguide.pdf - Page 4.

to situations where end-users' choice is materially reduced in practice" (Recital 7). There is always a multitude of possible connections with varying quality characteristics between every two end-points in the Internet. Therefore, NRAs have to take into account the market position of the ISPs and CAPs involved as well as the severity of quality deterioration which could even lead to undermining the essence of end-users' rights.

If BEREC decides to treat zero-rating as addressed by the regulation, all of the indicators in the text suggest that these zero-rating should be restricted or prohibited

(1) Freedom to impart information: The freedom of an individual to impart information is limited if the users of particular access services are blocked - or are forced to pay extra - for access to their information, while other services are available without limit. This is in clear violation of the rights of end-users according to Article 3(1).

(2) Commercial practice: Zero-rating treats different traffic in different ways, in order for some to be offered at one price and some to be offered at a different price. It is therefore a commercial practice and not a technically necessary intervention. This has been confirmed, *inter alia*, by the European Commission ("zero rating, also called sponsored connectivity, is a commercial practice")²³ and BEREC ("zero-rating is a commercial practice by which consumers are able to access certain content, services or applications without it counting towards any monthly data cap")²⁴.

(3) Blocking/throttling: In the absence of an additional payment once the data limit has been reached, traffic from non-zero-rated services can be blocked or throttled by the ISP, so zero-rating violates the rules against blocking and discrimination because it would be a TM measure purely based on commercial considerations.

(4) No longer than is necessary: The traffic management intrinsic to zero-rating is a permanent feature of the service and therefore in contravention of the principle that the measure should only be implemented as long as necessary.

It is difficult to reconcile the principles established in the Regulation with the practice of zero-rating. In fact, zero-rating restricts the right of all end-users under Article 3(1) to distribute and access information of their choice irrespective of their location or the location, origin or destination of the information. If information is made accessible via IAS and an end-user has bought the right to an IAS which has to offer him connectivity to "virtually all end-points in the internet", it is the right of the sending party to be accessible without interference or discriminatory pricing by the ISP.

If it is the choice of the user to access information which is outside a potential zero-rating practice of its ISP, that would constitute a material reduction of the essence of this end-user's right in practice against Article 3(2) and Recital 7. Application-specific volumes, speeds or commercial practices would undermine Article 3(1) and can therefore not be IAS products in line with this regulation.

23 European Commission - Fact Sheet: Roaming charges and open Internet, 30 June 2015, updated 27 October 2015 - http://europa.eu/rapid/press-release_MEMO-15-5275_en.htm

24 BEREC: How do consumers value net neutrality in an evolving internet marketplace?, June 2015 - http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/5024-berec-report-on-how-consumers-value-net-0.pdf

Furthermore, every differentiated pricing of data packages is unlawful discrimination, restriction and interference according to Article 3(3) subpara. 1.

Finally, we draw BEREC's attention to the legislative history of the instrument.²⁵ The fact that the initial proposal from the Commission to permit the offering of discriminatory services was deleted in the trilogue negotiations proves that it was not the intention of the co-legislators to permit this practice.

b) ISP practices limiting end users' rights?

Q: Article 3 (2) foresees contractual freedom and ISPs' freedom to conduct commercial practices. Could you provide examples when/under which circumstances commercial practices would limit the rights of end users? (Ref. Article 3(2) and recital 7)

Article 3(2) must be read in conjunction with Recitals 2, 3 and, in particular, Recital 7, which states that "any" commercial practices may not limit (without any exceptions being listed) the exercise of the rights to access and distribute information. In context, therefore, the only available interpretation relates to practices that are non-discriminatory offerings to the end-user. This would cover, for example, connection speed, non-discriminatory download limit, opt-in parental controls, additional services such as free e-mail, free anti-virus or other security tools, etc. In addition, it means that Article 3(2) cannot cover any practice which would lead to the service falling outside the notion of Internet Access Service which provides connectivity to, in principle, all end points of the Internet.

As pointed out previously, bearing both the final text and the legislative history in mind, it is not credible to believe that it was the intention of the legislator to facilitate the practice of zero-rating.

Zero-rating is detrimental to competition in the online market and for the rights of end-users because it creates the incentives for ISPs not to offer higher data caps. See the example of KPN mobile doubling their volumes after zero-rating was prohibited by Dutch NRA²⁶ or this example of Telekom Slovenije and Si.mobile offering higher data caps after zero-rating was prohibited by Slovenian NRA²⁷. Clearly, if the operator has the choice to create a business model out of artificial scarcity and restricting bandwidth, incentives for investment are reduced.

Zero-rating has a strong discriminatory effect on end-user choice because it destroys the level playing field among CAPs. ISPs act as gatekeepers by interfering with the choices of their users and thereby reduce the service offers available to them. Zero-rating harms start-up innovation in Europe and free speech, because most SMEs or low-cost speakers are not able to pay for zero-

25 EDRI: Net neutrality Document Pool II, 15 April 2015 (updated on 27 November 2015), <https://edri.org/net-neutrality-document-pool-2/>

26 Rewheel / Digital Fuel Monitor: In the Netherlands, where zero-rating is banned, KPN just doubled (free of charge) the mobile internet volume caps to encourage a carefree usage of its online videos, 6 February 2015, http://dfmonitor.eu/downloads/Banning_zerorating_leads_to_higher_volume_caps_06022015.pdf

27 Dušan Caf - Competitive Analysis & Foresight: Another win for net neutrality advocates in Slovenia: AKOS issues new decisions limiting zero-rating, 22 February 2015, <http://blog.caf.si/2015/02/another-win-for-net-neutrality-advocates-in-slovenia-akos-issues-new-decisions-limiting-zero-rating.html>

rating deals with ISPs. The theory that access fees would reduce the prices for IAS is not supported by any data. Economic theory would suggest to the contrary that this depends heavily on the market position of the players. The access fees paid by CAPs are often handed down to the consumers of those CAPs. Users also do not benefit from the incentive of ISPs for lower volume caps and higher volume prices. Therefore, the commercial practice of zero-rating restricts end-user freedom and cannot be considered legitimate under the TSM regulation, in particular Article 3(2) thereof²⁸.

c) Monitoring of traffic for the purpose of traffic management

Q: What is your understanding or view regarding the monitoring of traffic for the purpose of traffic management (ref. Article 3(3) subpara. 2)? What should ISPs be allowed to do in that regard under the TSM regulation?

In Recital 10, the Regulation 2015/2120 states that "reasonable traffic management does not require techniques which monitor the specific content of data traffic transmitted via the internet access service". Article 3(3) subpara. 2 is even stricter, as it states that "[reasonable traffic management] measures shall not monitor the specific content". We believe this recital and Article should be interpreted in a strict way, not allowing invasive data traffic or specific content monitoring techniques for the purpose of TM. In this sense, specific content for the purpose of TM should be understood in the broadest terms as to only specify the type of application (www, e-mail) in cases where such TM is applicable, but never the actual content, sender or receiver.

We urge BEREC to invite either the Article 29 Working Party or the European Data Protection Supervisor to provide specific guidance on the fundamental rights aspects of current traffic monitoring practices and technologies.

28 For a detailed analysis of the practice on zero-rating and its detrimental effects on user-choice and the level playing field of the online economy see Barbara van Schewick, Network Neutrality and Zero rating, 2012.

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