# TIM Response to Public Consultation on the draft BEREC Guidelines on the implementation of the Open Internet Regulation November 2019

TIM welcomes the opportunity to respond to public consultation on the draft BEREC Guidelines on the implementation of the Open Internet Regulation. We hope the following comments can serve as a constructive contribution to BEREC's deliberations on the draft Guidelines.

Topic	Paragraph	Overall	Explanation		
	#	description of		TIM Comments	Suggested amendment
		change			
Name of the		Name changed	Adapt the name	Positive change	
document		to BEREC	to be in line with		
		Guidelines on	the Open		
		the	Internet		
		Implementation	Regulation.		
		of the Open			
		Internet			
		Regulation			

Topic	Paragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
Commercial and technical conditions regarding servers provided by ISPs	32a and 32b	ISPs may provide additional endpoint-based services similarly to CAPs, and this amendment clarifies how NRA should assess blocking of traffic via such servers under Article 3(2).	Linked to paragraphs 78-78b. There has been a need for NRAs to clarify how to assess commercial and technical conditions when ISPs provide these services.	32a. It is positive that BEREC clarifies that ISPs can offer additional endpoint services in a similar way as third-party CAPs can. Any additional consideration leads to an unjustified different treatment of ISPs compared to third parties and should be deleted.  32b. All additional end-point based services should be considered out of scope of the regulation, in consideration that IAS consists of a connectivity service as indicated in Art. 2 of Regulation (EU) 2015/2120 and BEREC guidelines. All services based on measures applied at application layer, DNS, Http proxy and access router/modem, also already offered by players other than ISP, should be considered out of scope. BEREC itself states in guideline 78b ("[] these measures are executed in the end points, i.e. outside the IAS). The guideline should be deleted.	32a. Where an ISP provides additional end point-based services alongside and related to the IAS (whether the services are subscribed to at the same time as the IAS subscription or at a later stage), these additional services must be assessed in a similar way as can be assessed by the NRA. ISPs can offer additional services offered in a similar way by as-third party CAPs can. If such additional end point-based services are part of the agreement or are offered in addition to the agreement or are offered in addition to the agreement between the ISP and the end user, such services should be assessed under Article 3(2). Examples of such additional services are parental control services and filtering services provided via secondary DNS resolvers, HTTP proxy and access router/modem-based functions on end-user side of the network termination point::  32b . When assessing whether restrictions in such additional end point based services provided by the ISP limit the exercise of the end-users' rights laid down in article 3(1) or establish a possible circumvention of article 3(3), the NRA may among other factors take into account the following:  whether the IAS remains application agnostic and whether the commercial and technical conditions of the IAS vary depending on any choice of end point based blocking, for example by affecting the price or QoS of the IAS.  whether end-users remain in full control of the

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Topic	Paragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
					IAS, and may on the basis of informed consent, activate and deactivate end point based blocking by changing the setting on the end user computer, e.g. by configuring the client application software. If either of these conditions are not met, an ISP should be deemed to be infringing the Regulation. Any end point-based blocking should also conform to any national provisions on filtering practices, if existing. For more details on assessing these practices see paragraphs 78-78b.
QoS parameters other than volume and speed (application- agnostic QoS levels)	34a – 34c	Clarification that different application- agnostic QoS levels may be offered based on combination of different QoS	ISPs have argued that there is a need to offer IAS subscriptions with different levels of quality. When different QoS levels are	34. Positive clarification  34a Positive clarification that different IAS offers based on different QoS level are clearly allowed.  34c Positive clarification that a single IAS	34a. Different levels for QoS parameters other than data volumes and speeds, such as latency, jitter and packet loss, can also be agreed upon. When assessing cases in which ISPs provide IAS subscriptions with different levels of QoS parameters, NRAs should ensure that the implementation of the different QoS levels is application-agnostic within the same category of

Topic Paragraph	Overall description of	Explanation	TIM Comments	Suggested amendment
	change			
	parameters. This amendment clarifies how NRAs should assess these offers.	introduced, there is a risk that services requiring a higher level of quality will use the available network capacity resulting in very low network performance for lower quality services. Safeguards may need to be put in place to prevent this happening.	offer can allow multiple QoS levels at the same time. The concept of application agnostic should refer to applications belonging to the same category and should aim at equal treatment among these applications of the same category offered by different providers. Such as interpretation is coherent also with the fact that multiple QoS levels could coexist for a single IAS subscription.  It is not clear when it states that the QoS level in which specific applications are transmitted is not preselected by the ISP. ISPs should be allowed to predefine QoS levels for specific applications; the end user may modify this preselection (e.g. by configuring the client application software)	applications and transparent. Furthermore, the practice should not limit the exercise of the rights of end-users laid down in article 3(1).  34c. If IAS offers come to the market which facilitate multiple QoS levels at the same time for a single subscription, NRAs should note that this may be allowed as long as this practice is applicationagnostic within the same category of applicationa and is in line with the requirements in Articles 3(1) and 3(3). In such an assessment, the NRA may among other factors take into account that endusers must have full control over which applications transmit traffic over which QoS level (e.g. by configuring the client application software) and that the QoS level in which specific applications are transmitted is applied to the applications belonging to the same category without discriminating among the different not preselected by the ISP (e.g. based on commercial agreements with CAPs or the other end user). Such assessment procedures could be fine-tuned by the NRAs if and when new use cases are implemented by ISPs.

Topic	Paragraph	Overall	Explanation		
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		change			
Relationship be-	37	Clarification that	ISPs argue that	The sentence "Neither the rights as set	
tween Art. 3(1),		neither the	Art. 3(1) and Art.	out in Article 3(1) nor the requirements of	
3(2) and 3(3)		rights as set out	3(3) do not	Article 3(3) can be waived by an	
1		in Article 3(1)	automatically	agreement or commercial practice	
		nor the	apply to cases	otherwise authorised under Article 3(2)."	
		requirements of	under Art. 3(2),	seems in contrast with the freedom of	
		Article 3(3) can	meaning that	choice of the customer. E.g. When the	
		be waived by an	Art. 3(2)	customer is correctly and transparently	
		agreement or	overrules the	informed, the customer should be	
		commercial	other articles.	allowed to choose a IAS where a specific	
		practice	Therefore it was	traffic category is treated differently. This	
		otherwise	seen as useful to	is in line with guideline 34c.	
1		authorised	clarify the BEREC		
		under Article	position even		
		3(2).	further.		
Functionalities	73	Article 3(3)	ISPs have argued	Positive amendment	
that do not		requires that	that there is a		
affect traffic		traffic	need to clarify		
may run on a		management	that technical		
permanent		measures	traffic		
basis.		should not be	management in		
		maintained	network nodes		
		longer than	is running		
		necessary. This	permanently.		
		does not	However, they		
		prevent ISPs	only have an		
		from running	effect on traffic		
		measures on an	in times of		
		ongoing basis as	congestion.		
İ		long as the			
Ì		measure is not			
		in effect			
İ		permanently.			

Topic	Paragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
Data compression	77a	ISPs may implement data compression techniques as long as they are lossless i.e the content originally sent reaches its destination unmodified. Forcing adaptive bitrate coding does not represent data compression according to Recital 11.	Some stakeholders argued that application-specific throttling which forces content providers to supply video content at a lower resolution by adaptive bitrate coding represents a form of data compression.	IAS offers with different QoS levels could be offered as indicated by BEREC in guideline 34a giving to the user the possibility of choice among different offers.  The concept of application agnostic should be applied within the specific category of applications without discriminating among different CAPs.	77a. ISPs may use non-discriminatory data compression techniques in their networks as long as the content originally sent by an end point reaches its destination end point(s) unmodified, i.e. lossless compression. The use of application-specific throttling e.g. to force a CAP to supply video content in a lower resolution by the use of adaptive bitrate coding does not represent data compression according to Recital 11.

Topic	Paragraph	Overall	Explanation		
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Applicability of the rules against blocking of traffic	78 – 78b	Blocking of traffic is prohibited if it is executed within the network by the ISP. But such filtering is allowed if it is done outside of the network. NRAs need criteria to assess general aspects related to IAS, and specific cases such as HTTP proxy, DNS resolver, access router/modem etc.	Linked to paragraphs 32a-b. There is a need for NRAs to clarify how to assess blocking of traffic in endpoint-based services, in particular regarding how to determine whether the function is provided inside or outside the network.	78. In consideration that IAS consists of a connectivity service as indicated in Art. 2 of Regulation (EU) 2015/2120, all processing of application layer protocol elements (DNS, Http proxy, Caching and access router/modem) either offered by IPs or by players other than ISPs, should be considered out of scope.  78a and b Any references to specific technologies should be removed. Parental controls are also provided via primary DNS resolvers and the Guidelines should not dictate a specific technological solution. (See comments to guideline 32a)	78. Rules against blocking, slowing down, altering, restricting, interfering with, degrading or discriminating between traffic refer to measures put in place by the ISP in the network when providing an IAS. BEREC considers that these rules apply when the processing of application layer protocol elements takes place before the IP packets have been received at the destination IP address provided by the end-user computer. This means that the measures applied to the IP packet in the network of the ISP and before the IP packet has reached the destination IP address are met in a specific case, considered to fall within the scope of Article 3(3).  78a. The primary DNS resolver provided by the ISP is an inherent part of IAS, since without a DNS resolver, the IAS would be practically unusable. Therefore, it is considered part of the IAS and the measures implemented by it must comply with Article 3(3). Article 3(3) is also applied to any filtering functions provided in the modem and the access router, in circumstances where these, according to national law and practice, are considered part of the network over which the IAS is provided25.  78b. In contrast to measures applied within the network over which the IAS is provided.

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					paragraph 32a, ISPs can also offer these end point-based services (e.g. to provide parental control or filtering functions alongside the IAS) in a similar way to how they are offered by third party CAPs. Secondary DNS resolvers and HTTP proxy servers addressed by the end user computer are also examples of such end point-based services. On a case by case basis, end point-based traffic restrictions, such as blocking, should be evaluated under Article 3(2) as described in paragraph 32a and further.

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		change			
Monitoring	85	In order to	ISPs have argued	Positive amendment	
traffic for		identify security	that there is a		
security reasons		threats, traffic	need to clarify		
		must be	that monitoring		
		monitored on	components		
		an ongoing	that need to		
		basis. A	operate on an		
		clarification that	ongoing basis		
		such measures	are permissible.		
		may be			
		implemented in			
		the background			
		on a continuous		/	
		basis.			

Topic	Paragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
Specific level of quality for SpS does also include reliability	108 and 108a	Objective technical reasons for justifying a Specialised Service (SpS) are limited to the specific level of quality, which would also cover reliability. This could not be achieved over IAS for resource-constrained devices, due to energy exhaustion, interference or security threats.	Stakeholders have argued, in particular related to 5G, that services like M2M/IoT involve devices that are resource- constrained and that such devices require specific network conditions or behaviour as a result.	While the requirements established by the Regulation are clear, the Guidelines set specific additional details unduly broadening the discretion of the NRAs in this area. The result is that ISPs – confronted with such detailed prescriptions – experience high uncertainty unless that could only be eventually resolved by validating every use case ex ante, before launching a service, with the NRA, which is not the objective of the Regulation. This scenario is also not desirable as it would create a large burden for both ISPs and NRAs. BEREC focuses its attention on the control of all SoIAS, independently of their impact on IAS, indicating the obligation for their provision to demonstrate the necessity of levels of quality not assured over an IAS. It should be modified in order to allow the exploitation of technological opportunities for the provision of innovative services, such as augmented/ virtual reality, VoD services and security requirements, which can rapidly evolve on the basis of market's needs.	relevant information about their SoIAS specialised services, using powers conferred by Article 5(2). In their responses, the provider should give information about their SoIAS specialised services, including what the relevant levels of quality required are that are not assured by internet access services (e.g. latency, jitter and packet loss) but also other requirements for resource management as explained in the paragraph 108a below, and any contractual requirements. Furthermore, the "specific level of quality" should be specified. In case of dispute regarding SoIAS compliance with the Regulation and, NRAs it should be demonstrable shall demonstrate that this specific level of quality can cannot be assured with the same result over the IAS and that the quality requirements are objectively not necessary to ensure one or more key features of the service. In assessing objective necessity NRAs should take into account the needs of the service providers requiring a specific level of quality.

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Topic	Paragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
Specialised services	110a and 110b	New paragraphs containing clarifications relating to SpS and dedicated connectivity at the application level and logical separation of traffic between IAS and SpS.	The existing Guidelines have been misinterpreted and therefore a clarification is proposed.	Positive clarification that providers are free to choose if logical separation is provided with fixed or dynamic or without reservation of capacity for IAS vs OIAS.	
Reassessing whether SpS criteria are still met	112	Overall IAS quality will evolve positively over time leading to a situation where a SpS might no longer be necessary. NRAs have to reassess over time whether SpS criteria are still met.	Stakeholders have argued, in particular in relation to 5G, there is a need to clarify that the reassessment of SpS should take place over a larger timescale	As referred in paragraph 112, the general standard of IAS will change over time. In the face of it, paragraph 112, creates the expectation that there will be an ongoing evaluation of whether the SoIAS being provided at any given time could in fact be provided over the IAS, and that eventually ISPs could be required to discontinue a SoIAS if the general standard of the IAS improves. This obviously discourages the development of SoIAS and is in our view an unnecessarily strict interpretation of the Regulation. Some services will always remain SoIAS, such as critical mission services, while others will continue evolving with the general evolution of	112. Technological evolution and market demand will drive business models and the way services will be delivered to end users. The internet and the nature of IAS will evolve over time. A service that is deemed to be a specialised service today may not necessarily qualify as a specialised service in the future due to the fact that the optimisation of the service may not be objectively necessary, as the general standard of IAS may have improved. However, some services will always need On the other hand, additional services might emerge that need to be optimised, even as the standard of IAS improves. NRAs should assess whether a service qualifies as a specialised service on a case-by-case basis. In case of reassessment, this would be expected to take place over a larger timescale, usually several years. NRAs

Topic Pa	ragraph #	Overall description of change	Explanation	TIM Comments	Suggested amendment
				the IAS. An evolving regulatory qualification of services will cause regulatory uncertainty not allowing the optimal exploitation of technological challenges. Operators need a stable environment in which they can have guarantees that a SoIAS that was justified at the time of its development and adoption can continue to exist notwithstanding the evolution of standards. Thus, operators can invest in service innovation within a climate of trust. Therefore, paragraph 112 should be amended accordingly.	are not expected to keep specialised services under constant review. When an NRA assesses that a service that no longer qualifies as a specialised service due to the improved quality of IAS, the ISP should be allowed a reasonable transitional phase for phasing out of the specialised service. In these circumstances, national administrative and procedural laws apply, including observing the principle of proportionality.

Topic	Paragraph #	Overall description of	Explanation	TIM Comments	Suggested amendment
SpS should not be included to the detriment of the overall quality of IAS			Stakeholders argued that the wording in the Guidelines is too restrictive and prevents ISPs from implementing SpS, in particular related to 5G.	TIM Comments  121. The proposed measurement methodology is too complex and not technically feasible.	Suggested amendment  121. Specialised services are not permissible if they are to the detriment of the availability and general quality of the IAS. offered over the same network. There is a correlation between the performance of the IAS offer(s) (i.e. its availability and general quality) and whether there is sufficient capacity to provide specialised services in addition to IAS. NRAs may consider that IAS quality measurements could be performed with and without specialised services, both in the short term and in the long term which may include measurements before the specialised services are introduced in the market as well as after.

Topic	Paragraph	Overall	Explanation		
	#	description of		TIM Comments	Suggested amendment
		change			
Methodology for monitoring IAS performance	164 - 166	Paragraphs 164 and 165 were amended to ensure that full account was taken by NRAs of recent BEREC publications on assessment methodologies and to clarify which factors should be considered when implementing a measurement methodology. Paragraph 166 was updated to ensure that speed measurements should be calculated based on the transport layer protocol payload.	Since the publication of the BEREC Guidelines on the implementation of the Regulation, there have been a number of further publications by BEREC addressing areas such as assessment methodologies and measurement tools. These paragraphs have been updated to take into account these publications.	It is important to stress that NRA should assess already implemented measurement tools at National Level against BEREC guidance but that there is no obligation to modify existing tools.	165. Notwithstanding the validity of measurement tools already implemented at national level, when implementing measurement methodologies, NRAs should take account of and consider guidance on methodologies developed during BEREC's work on QoS in the context of Net Neutrality, especially those found in:  - the 2014 Monitoring quality of Internet access services in the context of net neutrality BEREC report;49  - Net neutrality; measurement tool specification50  - BoR (18) 32 Annex 151  - The Open Source implementation of the BEREC Net Neutrality measurement tool.

#### Questions regarding paragraphs 69 and 70

While consulting the draft Guidelines, BEREC also welcomes feedback on paragraphs with no suggested amendments. BEREC understands that there has been discussion among some stakeholders that the methods mentioned in the paragraphs 69 and 70 of the guidelines would not be sufficient for traffic identification and that e.g. domain names should be considered as generic content:

69. In assessing traffic management measures, NRAs should ensure that such measures do not monitor the specific content (i.e. transport layer protocol payload).

70. Conversely, traffic management measures that monitor aspects other than the specific content, i.e. the generic content, should be deemed to be allowed. Monitoring techniques used by ISPs which rely on the information contained in the IP packet header, and transport layer protocol header (e.g. TCP) may be deemed to be generic content, as opposed to the specific content provided by end-users themselves (such as text, pictures and video).

Therefore, BEREC has prepared these questions to seek feedback from all stakeholder groups on this particular topic:

A general comment on guideline 69: We propose to erase the text in parenthesis ("transport layer protocol payload) as the ISP has to use the information contained in the TCP level of the payload in compliance with privacy rules for an appropriate management and provision of the service to the end user.

1) Are you aware of any IAS which operate "specific categories of traffic" (ref. Article 3(3)) on the market, and if so which categories are defined? For ISPs: If you have implemented traffic categoriesation in your network, please explain which technical quality of service requirements these categories are based on.

For the fixed network, the categorization of traffic exists only for TJM managed services (come CDN content and TIM VoIP services), but not for the internet access service.

The criteria for the categorization are the IP precedence and the source/destination address to/from interested managed platforms. Categorization based on Quality of Service level are not foreseen.

2) Please explain in detail which methods exist and which of these methods are used in practice for traffic identification for billing purposes (in particular zero rating) and for traffic categorisation for traffic differentiation purposes. For ISPs: If you have implemented any of these methods in your network, please explain why the particular methods have been chosen. Please give concrete examples.

Regarding the categorization of traffic for billing purposes, the methods used for the traffic identification are:

• Header Inspection based on IP address source/destination, TCP/UDP port source /destination, Protocol Number;

•	Deep Packet Inspection based on inspection at the application layer. DPI can be carried out with a deterministic methodology (for instance,
	the recognition of strings in a URL), or heuristic through the signature of ISP proprietary protocols/applications obtained from Ericsson. Traffic
	from Netflix, Sky, Spotify, etc. is identified with this methodology.

One method or the other is applied based on the availability of the elements useful for identifying the traffic.

For billing purposes, the Zero Rating traffic is classified; the traffic is identified only through the tags, regardless of which offers are subscribed by the customer. This traffic typically involves services provided by us, for example TIM Video, TIM music, Cloud, caring services.

A second classification of the traffic is done based on the offer subscribed by the customer and provides for the classification of contents such as Video, Music, Chat, Social, Web Voice. These traffic categories are identified and classified by the Network and subject to appropriate pricing by the billing systems.

There are no zero-rating services for consumers on the fixed network; tariff classification is not identifiable for billing purposes.

3) Is it possible to identify traffic for billing purposes and for traffic categorisation using the techniques mentioned in BEREC GL paragraphs 69 and 70 are there practical differences between the different use cases (billing/traffic categorisation)? Please ex-plain why you believe the current Guidelines sufficient or not by providing concrete examples.				
The provisions of the guidelines 69 and 70 are in line what is currently implemented.				
4) For End-Users: Do you feel informed about reasonable traffic management measures and the methods used for the identification of traffic? Please explain.				

#### Other issues in addition to the ones listed above:

Guidelines concerning definitions (Article 2 of the Regulation)		
Paragraph 17		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
17. BEREC understands a sub-internet service to be a service which restricts access to services or applications (e.g. banning the use of VoIP or video streaming) or enables access to only a pre-defined part of the internet (e.g. access only to particular websites). NRAs should take into account the fact that an ISP could easily circumvent the Regulation by providing such sub-internet offers. These services should therefore be considered to be in the scope of the Regulation and the fact that they provide a limited access to the internet should constitute an infringement of Articles 3(1), 3(2) and 3(3) of the Regulation. BEREC refers to these service offers as 'sub-internet services', as further discussed in paragraphs 38 and 55.	17. BEREC understands a sub-internet service to be a service which restricts access to services or applications. Such a service will not always constitute a circumvention of the Regulation. In the event such a service circumvents the Regulation (e.g. by banning the use of competing services such as VoIP or video streaming) or enables access to only a predefined part of the internet (e.g. access only to particular websites)., NRAs should take into account the fact that an ISP could easily circumvent the Regulation by providing such sub-internet offers. These services should therefore be considered to be in the scope of the Regulation and the fact that they provide a limited access to the internet should be able to assess whether they constitute an infringement of Articles 3(1), 3(2) and 3(3) of the Regulation. BEREC refers to these service offers as 'sub-internet services', as further discussed in paragraphs 38 and 55.	
luctif	ication	

#### Justification

The definition and prohibition of so-called 'sub-internet' is not addressed in the Regulation. The Guidelines consider this kind of offer, without any analysis of the effective adverse effect on customer choice, by definition as in violation of the Regulation. This may render more difficult the launch of innovative offers such as in the fields of eHealth, eGovernment or the internet of things, where the Guidelines risk creating discrimination by technology where limited access for 'device-based' offers would be permitted whereas limited "network-based" access is prohibited. Internet of things devices may be offered with a restricted set of internet end points without circumventing the purpose of the Regulation as they are not destined to offer an Internet access to end-users or the general public. We point to Recital 16 of the Regulation which contains a reference to new type of services, such as machine-to-machine communication services, thereby justifying a difference in treatment (dependent on specific levels of quality).

Guidelines concerning traffic management (Article 3(3) first subparagraph of the Regulation)		
Paragraph 53		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
53. NRAs should take into account that equal treatment does not necessarily imply that all end-users will experience the same network performance or quality of service (QoS). Thus, even though packets can experience varying transmission performance (e.g. on parameters such as latency or jitter), 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.	53. NRAs should take into account that equal treatment does not necessarily imply that all end-users will experience the same network performance or quality of service (QoS) which may vary depending on their device, coverage, usage, the content they are viewing and other objective factors. Thus, even though packets can experience varying transmission performance (e.g. on parameters such as latency or jitter), 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 such management is based on objectively different technical quality of service requirements for specific categories of traffic which benefit the overall quality and/or efficiency of the network.	
Justification		

We are of the view that the Guidelines are too restrictive on this point in their interpretation of the Regulation in relation to operators' ability to manage network traffic.

Guidelines concerning traffic management (Article 3(3) first subparagraph of the Regulation)  Paragraph 55		
Text of the BEREC Guidelines on Net Neutrality Proposed amendment		
<ul> <li>55. In case of agreements or practices involving technical discrimination, this would constitute unequal treatment which would not be compatible with Article 3(3). This holds in particular for the following examples:         <ul> <li>A practice where an ISP blocks, slows down, restricts, interferes with, degrades or discriminates access to specific content, one or more applications (or categories thereof), except when justified by reference to the exceptions of Article 3(3) third subparagraph.</li> </ul> </li> </ul>	<ul> <li>55. In case of agreements or practices involving technical discrimination, this would constitute unequal treatment which would not be compatible with Article 3(3). This holds in particular for the following examples:         <ul> <li>A practice where an ISP blocks, slows down, restricts, interferes with, degrades or discriminates access to specific content, one or more applications (or categories thereof), except when justified by reference to the exceptions of Article 3(3) third subparagraph or</li> </ul> </li> </ul>	

#### **TIM Comments and Suggested Amendments**

- IAS offers where access to the internet is restricted to a limited set of applications or end points by the end-user's ISP (sub-internet service offers) infringe upon Article 3(3) first subparagraph, as such offers entail blocking of applications and / or discrimination, restriction or interference related to the origin or destination of the information.
- 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), as it would infringe Article 3(3) first (and third) subparagraph.

#### under explicit customer request.

- IAS offers where access to the internet is restricted to a limited set of applications or end points by the end-user's ISP (sub-internet service offers) infringe upon Article 3(3) first subparagraph, as such offers entail blocking of applications and / or discrimination, restriction or interference related to the origin or destination of the information, except under explicit customer request.
- 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), as it would infringe Article 3(3) first (and third) subparagraph.

#### Justification

We are of the view that the Guidelines are also on this point too restrictive in their interpretation of the Regulation in relation to operators' ability to manage network traffic. Paragraph 55 restricts *per se* the ability of providers to offer certain types of plans to consumers and businesses that enhance their choice without a case by case analysis, such as for instance parental control or data caps. Also see the TNO study¹ that provides some examples.

Guidelines concerning traffic management (Article 3(3) second subparagraph of the Regulation)				
paragraph 61				
Text of the BEREC Guidelines on Net Neutrality Proposed amendment				
61. When considering whether a traffic management measure is proportionate, NRAs should consider the following:	61. When considering whether a traffic management measure is proportionate, NRAs should consider the following:			
There has to be a legitimate aim for this measure, as specified in the first sentence of     Recital 9, namely contributing to an efficient use of network resources and to an optimisation of overall transmission quality;	There has to be a legitimate aim for this measure, as specified in the first sentence of Recital 9, namely contributing to an efficient use of network resources and to an optimisation of overall transmission quality;			
The traffic management measure has to be suitable to achieve this aim (with a requirement of evidence to show it has that effect and that it is	The traffic management measure has to be suitable to achieve this aim (with a requirement of evidence to show it has that effect and			

<sup>&</sup>lt;sup>1</sup> "5G and Net Neutrality: a functional analysis to feed the policy discussion", Dr P.A. Nooren, Dr N.W. Keesmaat, A.H. van den Ende, A.H.J. Norp, April 2018

#### **TIM Comments and Suggested Amendments**

not manifestly inappropriate);

- The traffic management measure has to be necessary to achieve this aim;
- There is not a less interfering and equally effective alternative way of managing traffic to achieve this aim (e.g. equal treatment without categories of traffic) with the available network resources;
- The traffic management measure has to be appropriate, e.g. to balance the competing requirements of different traffic categories or competing interests of different groups.

that it is not manifestly inappropriate);

- The traffic management measure has to be necessary to achieve this aim;
- There is not a less interfering and equally effective alternative way of managing traffic to achieve this aim (e.g. equal treatment without categories of traffic) with the available network resources;
- The traffic management measure has to be appropriate, e.g. to balance the competing requirements of different traffic categories or competing interests of different groups.
- Traffic management will evolve over time and technical solutions contributing to better quality and a more efficient, dynamic and flexible use of network resources should be encouraged.

#### Justification

Networks Traffic management (TM) should be considered from technical, commercial, demand and network configuration perspectives. The Regulation acknowledges this multi-faceted nature of TM and provides the flexibility to providers of IAS to implement reasonable TM (Article 3(3)) and providers of ECS to offer services other than IAS optimised for specific content, application or service where such optimisation is necessary to meet a specific level of quality (Article 3(5)).

Also, any ISP's decision on investment and TM measures to improve its network efficiency, should remain its sole responsibility, as it is the ISP that will bear the financial consequences. Finally, networks will become increasingly agile - such evolution will allow ISPs to answer even more effectively to specific needs and bring benefits to end-users. Thus such evolution will require even more dynamic network management.

Paragraph 66			
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment		
66. Based on this, reasonable traffic management may be applied to differentiate between objectively different "categories of traffic", for example by reference to an application layer protocol or generic application types (such as file sharing, VoIP or instant messaging), only in so far as:  • the application layer protocol or generic application types require objectively different technical QoS;	66. Based on this, reasonable traffic management may be applied to differentiate between objectively different "categories of traffic". , for example by reference to an application layer protocol or generic application types (such as file sharing, VoIP or instant messaging), only in so far as: When assessing whether such reasonable traffic management is justified, NRAs should inter alia take into account		

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- applications with equivalent QoS requirements are handled agnostically in the same traffic category; and
- justifications are specific to the objectives that are pursued by implementing traffic management measures based on different categories of traffic.
- the application layer protocol or generic application types require objectively different technical OoS:
- applications with equivalent QoS requirements are handled agnostically in the same traffic category; and
- justifications are specific to the objectives that are pursued by implementing traffic management measures based on different categories of traffic.

#### Justification

The efficient use of network resources is the objective of traffic management, as recognized by the Regulation (see Art 3(3) and the corresponding recitals). Consequently, the Guidelines should not as a priori set limits on what can be considered as reasonable or not, as this is not done in the Regulation itself and is not the function of the Guidelines. Instead, it will be for the NRAs to identify harm and establish the real nature of undue limitation of the Open Internet, before taking action against a specific practice. Other elements than those listed in this paragraph of the BEREC Guidelines could be relevant.

In this context we also signal a particular concern with the use of the concept of "agnostic" that goes beyond the provisions of the Regulation. We therefore believe the term 'agnostic' should be deleted from the various Paragraphs of the Guidelines.

Paragraph 68		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
68. In the event that traffic management measures are based on commercial grounds, the traffic management measure is not reasonable. An obvious example of this could be where an ISP charges for usage of different traffic categories or where the traffic management measure reflects the commercial interests of an ISP that offers certain applications or partners with a provider of certain applications. However, NRAs do not need to prove that a traffic management measure is based on commercial grounds; it is sufficient to establish that the traffic management measure is not based on objectively different technical QoS requirements.	68. In the event that traffic management measures are only or predominantly based on commercial grounds, the traffic management measure is not reasonable unless such measure has been selected by an informed end-user and is in accordance with Article 3(2), an example of which is data cap. An obvious example of this could be where an ISP charges for usage of different traffic categories or where the traffic management measure reflects the commercial interests of an ISP that offers certain applications or partners with a provider of certain applications. However, NRAs do not need to prove that a traffic management measure is based on commercial grounds; it is sufficient to establish that the traffic management measure is not based on objectively	

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different technical QoS requirements.

#### Justification

While the regulation prohibits commercial discrimination of traffic management between applications and services within a IAS offer, it explicitly supports segmentation of IAS offers proposed to end users and therefore segmentation between end users, which should be acknowledged by the Guidelines. The wording "Not based on commercial considerations" in the second subparagraph should therefore be read in its context and not as an absolute standalone rule. Paragraph 68 should therefore be adapted accordingly. This is confirmed in the conclusion of para. 5.4 of the TNO study: 'In the remainder of this study, we assume that the intention of the Regulation is best reflected in the majority interpretation. We thus assume that it is allowed to have multiple IASs with different traffic management for a given end user.'

Guidelines concerning traffic management measures going b	eyond reasonable measures (Art. 3(3) (c) of the Regulation)			
Paragraph 93				
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment			

#### 93. As part of their scrutiny of congestion management practices, NRAs may monitor that

ISPs properly dimension their network, and take into account the following:

- if there is recurrent and more long-lasting network congestion in an ISP's network, the ISP cannot invoke the exception of congestion management (ref. Recital 15);
- application-specific congestion management should not be applied or accepted as a substitute for more structural solutions, such as expansion of network capacity.

- 93. As part of their scrutiny of congestion management practices, NRAs may rely on BEREC's proposed monitoring methodology to measure the general quality of internet access services. monitor that ISPs properly dimension their network, and take into account the following:
  - if there is recurrent and more long-lasting network congestion in an ISP's network, the ISP cannot invoke the exception of congestion management (ref. Recital 15);
  - application specific congestion management should not be applied or accepted as a substitute for more structural solutions, such as expansion of network capacity.

#### Justification

When considering the traffic management measures to prevent network congestion, BEREC should acknowledge that network investment decisions are and shall remain in network operators' hands. NRAs should only monitor that rules set in the Regulation are not infringed.

Furthermore, as acknowledged by the Regulation, reasonable traffic management is necessary and should not be considered as secondary to network investment; network investment decisions should be left to operators. It is simply wrong to consider that more investments in capacity would be the best answer in all cases to traffic management as implied by paragraph 93 of the Guidelines (for instance the latency needs cannot be addressed simply

by adding more capacity). Efficient use of network resources should be an overriding objective.

Guidelines concerning Services other than IAS, SoIAS (Article 3(5) first subparagraph of the Regulation)			
Paragraph 105			
Text of the BEREC Guidelines on Net Neutrality Proposed amendment			
105. NRAs should verify whether the application could be provided over IAS at the specific levels of quality which are objectively necessary in relation to the application, or whether they are instead set up in order to circumvent the provisions regarding traffic management measures applicable to IAS, which would not be allowed.	105. Nothwithstanding Paragraph 21, NRAs could should verify whether an application could be provided over IAS at the specific levels of quality which are objectively necessary in relation to the application in order to ensure that , in case there is suspicion that or whether they are not instead set up in order to circumvent the provisions regarding traffic management measures applicable to IAS, which would not be allowed.		
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#### Justification

The verification requirement should be seen in light of the objective of the Regulation, as set out in Paragraphs 103 and 104. Investigations related to the necessity of optimization regarding SoIAS should not be carried out routinely, but only in case there is concern that the service is aimed at circumventing the provisions regarding traffic management measures applicable to IAS. Routine investigation of all SoIAS, as the Guidelines suggest, would introduce significant administrative burden for both regulators and operators and would slow down the pace of innovation. This is aligned with BEREC opinion that reminds that the Regulation does not require an ex ante authorization in terms of commercial practices, traffic management or specialised services. Objective necessity of optimization should take into account the needs of the users of SoIAS (see more below).

Guidelines concerning Services other than IAS, SoIAS (Article 3(5) first subparagraph of the Regulation)  Paragraph 111		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
111. NRAs should verify whether, and to what extent, optimised delivery is objectively necessary to ensure that the requirements of one or more specific and key features of the content, applications and services are met, and to enable a corresponding quality assurance to be given to end-users.	111. NRAs should_could_verify whether, and to what extent, optimised delivery is objectively necessary to ensure that the requirements of one or more specific and key features of the content, applications and services are met, and to enable a corresponding quality assurance to be given to	

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To do this, the NRA should assess whether an electronic communication service, other than IAS, requires a level of quality that cannot be assured over an IAS. If not, these electronic communication services are likely to circumvent the provisions of the Regulation and are therefore not allowed. In the assessment NRAs should take into account that different network technologies might provide different levels of performance.

end-users. To do this, the NRA could assess whether an electronic communication service, other than IAS, requires a level of quality that cannot be assured over a IAS. If not, these electronic communication services are likely to circumvent the provisions of the Regulation and are therefore not allowed. In the assessment-NRAs should take into account that different network technologies might provide different levels of performance.

#### Justification

BEREC should ensure that the wording of the Guidelines does not hinder innovative services, like the delivery of voice over Wi-Fi, IoT or virtual reality. In that sense, the Guidelines introduce unnecessary additional criteria and requirements in the assessment of these types of services. Paragraph 111 should be redrafted as the Regulation sets out the requirements on IAS and allows operators to offer SoIAS subject to not impairing the IAS aspects of the Regulation. Since the objective of the Open Internet Regulation is to protect IAS, there should not be over prescriptive and detailed assessments of each and every service other than IAS, as long as the impairment rule is respected.

Guidelines concerning SoIAS (Article 3(5) second subparagraph of the Regulation) Paragraphs 116, 119		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
116. Specialised services shall only be offered when the network capacity is sufficient such that the IAS is not degraded (e.g. due to increased latency or jitter or lack of bandwidth) by the addition of specialised services. Both in the short and in the long term, specialised services shall not lead to a deterioration of the IAS quality for end- users. This can, for example, be achieved by additional investments in infrastructure which allow for additional capacity so that there is no negative impact on IAS quality.	116. SoIAS Specialised services shall only be offered when the network capacity is sufficient such that the IAS is not degraded (e.g. due to increased latency or jitter or lack of bandwidth) by the addition of specialised services. Bboth in the short and in the long term, specialised services SoIAS shall not lead to a deterioration of the general IAS quality for end- users. This can, for example, be achieved by additional investments in infrastructure which allow for additional capacity so that there is no negative impact on IAS quality.	
119. NRAs could request information from ISPs regarding how sufficient capacity is ensured, and at which scale the service is offered (e.g. networks, coverage and end-	119. NRAs could request information from ISPs regarding how sufficient capacity is ensured, and at which scale the service is offered (e.g. networks, coverage and end-	

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NRAs could then assess how ISPs have estimated the additional capacity required for their specialised services and how they have ensured that network elements and connections have sufficient capacity available to provide specialised services in addition to any IAS provided.

users) in case of evidence that service is at the detriment of the general quality of IAS.

NRAs could then assess how ISPs have estimated the additional capacity required for their specialised services and how they have ensured that network elements and connections have sufficient capacity available to provide specialised services in addition to any IAS provided.

#### Justification

The requirement in paragraph 116, according to which the IAS must not be deteriorated, cannot be demonstrated, as "empty network" and "network with specialised services" will definitely show different results.

On Paragraph 119, again, and as confirmed by BEREC in its Opinion, there is no *ex ante* authorization of ISPs providers and therefore NRAs should not implement a systematic monitoring *ex post* assessment of the various offers of the ISPs. It should only investigate in case there is evidence of an ongoing issue.

#### Information on traffic management and quality Paragraph 136 **Text of the BEREC Guidelines on Net Neutrality Proposed amendment** 136. The information should be clear and comprehensive. The information 136. The information should be clear and comprehensive. The information should not simply consist of a general condition stating possible impacts of should not simply consist of a general condition stating possible impacts of traffic management measures that could be applied in accordance with the traffic management measures that could be applied in accordance with Regulation. Information should also include, at least, a description of the the Regulation but should enable a general understanding of the possible impacts of traffic management practices which are in place on the **practices applied**. Information should also include, at least, a description IAS. of the possible impacts of traffic management practices which are in place on the IAS without requiring the indication of technical parameters. Additional information can be required to be published on the website without being part of the contract, particularly if this information is only relevant for a specific group of end-users or if the information is frequently updated due to objectively justified reasons, such as to ensure network security. Justification

The proposed amendment takes into account that providers should not be obliged to indicate additional technical parameters or specific technical details

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in the contract, which are not foreseen in the legal text. If providers have to alter such parameters or details due to required network adjustments, endusers would automatically have a termination right. Consequently, crucial service evolution would be hindered, without adding value for average endusers. Instead, NRAs should support that end-users gain a general understanding on practices applied. Irrespective of the contractual information, providers could be required to publish further general technical information on their websites where considered necessary, particularly if such information is only of interest for specific end-users or where it alters quickly in dynamic networks.

Contractual compliance and minimum speed Paragraph 143		
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment	
143. The minimum speed is the lowest speed that the ISP undertakes to deliver to the enduser, according to the contract which includes the IAS. In principle, the actual speed should not be lower than the minimum speed, except in cases of interruption of the IAS. If the actual speed of an IAS is significantly, and continuously or regularly, lower than the minimum speed, it would indicate non-conformity of performance regarding the agreed minimum speed.	143. The minimum speed is the lowest speed that the ISP undertakes to deliver to the end-user, according to the contract which includes the IAS. In principle, the actual speed should not be lower than the minimum speed at any time, except in cases of interruption of the IAS. If the actual measured speed of an IAS is significantly, and continuously or regularly, lower than the agreed minimum speed, it would indicate non-conformity of performance regarding the agreed minimum speed.	

#### Justification

The Guidelines go beyond the regulation, which only considers a contractually agreed speed parameter as non-conforming if the measured speed is significantly, and continuously or regularly lower than the speed agreed in the contract. The relation of "minimum" and "actual speed" cannot determine non-conformity.

Specifying minimum speed Paragraph 144	
Text of the BEREC Guidelines on Net Neutrality	Proposed amendment
144. NRAs could set requirements on defining minimum speed under Article 5(1), for example that the minimum speed could be in reasonable proportion to the maximum speed.	144. NRAs could set requirements on defining minimum speed under Article 5(1), for example that the minimum speed could be in reasonable proportion to the maximum speed.

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#### Justification

Considering the variety of technologies and the required commercial freedom, legislators have refrained from further specifying the detailed information requirements, such as on minimum speed. BEREC should at least not advise NRAs to apply specific restrictions, such as limiting the possibility to agree specific speed ranges by introducing random "proportions" without considering individual technological conditions.

### Monitoring systems and Certification

#### Paragraph 161

#### Text of the BEREC Guidelines on Net Neutrality

161. The relevant facts proving a significant discrepancy may be established by any monitoring mechanism certified by the NRA, whether operated by the NRA or by a third party. The Regulation does not require Member States or an NRA to establish or certify a monitoring mechanism. The Regulation does not define how the certification must be done. If the NRA provides a monitoring mechanism implemented for this purpose it should be considered as a certified monitoring mechanism according to Article 4(4).

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161. The relevant facts proving a significant discrepancy may be established by any monitoring mechanism certified by the NRA, whether operated by the NRA or by a third party. The Regulation does not require Member States or an NRAs must to establish or certify on an IAS provider's request a monitoring mechanism. The Regulation does not define how the certification must be done. If the NRA provides a monitoring mechanism implemented for this purpose it should must be certified by an independent third partyconsidered as a certified monitoring mechanism according to Article 4(4).

#### Justification

BEREC's Guidelines need to promote that consumers have the chance to properly understand whether the delivered performance reflects the contractual agreement. This can only be ensured if any offered measurement system that is used to assess legal compliance is certified based on robust criteria. The Regulation's text does not exclude systems provided by NRAs from the certification process, which should be done by an independent third party.