



Public consultation on draft BEREC Guidelines on implementation of net neutrality rules		
Comments by Forthnet S.A.		
Original	Proposal	Justification
<p>[6] NRAs may take into account the interconnection policies and practices of ISPs in so far as they have the effect of limiting the exercise end-user rights under Article 3(1). For example, this may be relevant in some cases, such as if the interconnection is implemented in a way which seeks to circumvent the Regulation.</p>	<p>[6] NRAs may take into account the interconnection policies and practices of ISPs only in so far as they have the effect of limiting the exercise end-user rights under Article 3(1). For example, this may be relevant in some cases, such as if the interconnection is implemented in a way which seeks to circumvent the Regulation.</p>	<p>Interconnection is separately regulated and falls outside the scope of the retail provision of Internet Access Services (IAS). It was intentionally not included within the Regulation. By omitting this vague clause that lacks of clarity, NRA's powers to intervene at any point of time are not limited.</p>
<p>[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 35 and 52.</p> <p>[35] If an ISP contractually (as opposed to technically) banned the use of specific content, or one or more applications/services or categories thereof (for example, banning the use of VoIP) this would limit the exercise of the end-user rights set out in Article 3(1). This would be considered to be an offer of a sub-internet service (see paragraph 17).</p>	<p>[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 35 and 52.</p> <p>[35] If an ISP contractually (as opposed to technically) banned the use of specific content, or one or more applications/services or categories thereof (for example, banning the use of VoIP) this would limit the exercise of the end-user rights set out in Article 3(1). This would be considered to be an offer of a sub-internet service (see paragraph 17).</p>	<p>Examples of "sub-internet" offers that restrict access to services or applications are the following ones :</p> <ul style="list-style-type: none"> • access to a WIFI registration page • access to a limited set of services (e.g. eHealth, educational pages, eGovernment) • access to a top-up page for prepaid customers • e-book readers • Machine-to-Machine services <p>According to the BEREC text, all above shall be prohibited. Not all sub-internet offers circumvent the provisions of Article 3(1). This shall be a case-by-case analysis for the NRAs, rather than making substantive decisions on general definitions.</p> <p>Therefore Guidelines should not go beyond Regulation's definition ("an IAS provides connectivity to virtually all end-points of the internet") and they shall clarify that sub-internet offers fall outside the scope of Articles 3(1)-(3) of the Regulation, whether limited via the network or the terminal equipment used.</p>

<p>[52] 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:</p> <p>~ 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.</p> <p>~IAS offers where access to the internet is restricted to a limited set of applications or endpoints 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.</p> <p>~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.</p>	<p>[52] 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:</p> <p>~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.</p> <p>~IAS offers where access to the internet is restricted to a limited set of applications or endpoints 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.</p> <p>~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.</p>	<p>“Sub-internet” offers, in terms of customer’s choices on what applications to access or not, shall be treated on a different basis. Under Article 3(2), end users have the right to agree the commercial and technical conditions and characteristics of their internet access service of their choice. IAS providers should be able to offer an option to the end-users by which end-users may choose for whatever reason to ban types of applications or specific content (e.g. child protection measures, ad-blocking or secure internet browsing).</p>
<p>[54] In assessing whether an ISP complies with the principle of equal treatment set out in Article 3(3) first subparagraph, NRAs should take into account whether a measure (which, prima facie, appears to infringe this principle) is a reasonable traffic management measure. The principle of equal treatment of traffic does not prevent ISPs from implementing reasonable traffic management measures in compliance with Article 3(3) second subparagraph.</p>		<p>It would be helpful if BEREC included traffic management measures which are perceived as reasonable to provide some guidance to operators</p>
<p>[58] When considering whether a traffic management measure is</p>	<p>[58] When considering whether a traffic management measure is</p>	<p>BEREC’s requirements are more</p>

<p>proportionate, NRAs should consider the following:</p> <p>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.</p> <p>~The traffic management measure has to be suitable to achieve the aim (with a requirement of evidence to show it will have that effect and that it is not manifestly inappropriate).</p> <p>~The traffic management measure has to be necessary to achieve the aim.</p> <p>~There is not a less interfering and equally effective alternative way of achieving this aim (e.g. equal treatment without categories of traffic) with the available network resources.</p> <p>~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.</p> <p>[70] This does not prevent, per se, a trigger function to be implemented and in place (but with the traffic management measure not yet effective) on an ongoing basis inasmuch as the traffic management measure only becomes effective in times of necessity. Necessity can materialise several times, or even regularly, over a given period of time. However, where traffic management measures are permanent or recurring, their necessity might be questionable and NRAs should, in such scenarios, consider whether the traffic</p>	<p>proportionate, NRAs should consider the following:</p> <ul style="list-style-type: none"> • 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 optimization of overall transmission quality. • The traffic management measure has to be suitable to achieve the aim (with a requirement of evidence to show it will have that effect and that it is not manifestly inappropriate). <ul style="list-style-type: none"> • The traffic management measure has to be necessary to achieve the aim. • There is not a less interfering and equally effective alternative way of achieving 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 <p>[70] This does not prevent, per se, a trigger function to be implemented and in place (but with the traffic management measure not yet effective) on an ongoing basis inasmuch as the traffic management measure only becomes effective in times of necessity. Necessity can materialise several times, or even regularly, over a given period of time. However, where traffic management measures are permanent or recurring, their necessity might be questionable and NRAs should, in such scenarios, consider whether the traffic</p>	<p>restrictive than the requirements set in the Regulation. The Regulation acknowledges that “reasonable traffic management” is allowed on the basis of contribution to an efficient use of network resources (Ref. Recital 9).</p> <p>According to BEREC Guidelines, NRAs are required to monitor that IAS providers properly dimension their network and application-specific congestion management should not be applied or accepted as a substitute for more structural solutions or other options in general.</p> <p>However, in practice traffic management is essential for network dimensioning and the efficient management of the network resources. In addition, it produces real benefits for the end-users, such as keeping user cost low and ensuring better quality of service.</p> <p>BEREC should acknowledge that:</p> <ul style="list-style-type: none"> • Some traffic management techniques, such as optimization, may be applied on an ongoing basis (permanent or recurring) to ensure better quality overall. • Investment is not always the right solution to manage traffic. In practice, investment is constrained, by availability of spectrum, planning, interference between equipment and access to fiber. The Regulation provides that even when addressing exceptional congestion, investment would only be necessary if congestion occurred for such extensive periods that a capacity expansion would
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<p>management measures can still be qualified as reasonable within the meaning of Article 3(3) second subparagraph.</p>	<p>management measures can still be qualified as reasonable within the meaning of Article 3(3) second subparagraph. BoR (16) 94 18 Distinction from exceptional traffic management measures</p>	<p>be economically justified (Ref. Recital 15).</p> <ul style="list-style-type: none"> Existing and new methods of traffic management should be encouraged in order to deliver the quality that end users expect.
<p>[80] Conducting traffic management measures in order to preserve integrity and security of the network could basically consist of restricting connectivity or blocking of traffic to and from specific endpoints. Typical examples of such traffic management measures include:</p> <ul style="list-style-type: none"> · blocking of IP addresses, or ranges of them, because they are well-known sources of attacks; · blocking of IP addresses from which an actual attack is originating; · blocking of IP addresses/IAS showing suspicious behaviour (e.g. unauthorised communication with network components, address spoofing); · blocking of IP addresses where there are clear indications that they are part of a bot network; · blocking of specific port numbers which constitute a threat to security and integrity. 	<p>80. Conducting traffic management measures in order to preserve integrity and security of the network could basically consist of restricting connectivity or blocking of traffic to and from specific endpoints. Typical examples of such traffic management measures include:</p> <ul style="list-style-type: none"> · blocking of IP addresses, or ranges of them, because they are well-known sources of attacks; · blocking of IP addresses from which an actual attack is originating; · blocking of IP addresses/IAS showing suspicious behaviour (e.g. unauthorised communication with network components, address spoofing); · blocking of IP addresses where there are clear indications that they are part of a bot network; · blocking of specific port numbers which constitute a threat to security and integrity. · blocking of specific protocols which constitute a threat to security and integrity of IAS provider's network. 	<p>An example is OSPF (Protocol 89) which is used for routing IP packets in provider networks and is common to be denied at various points in the network for security reasons.</p> <p>Indicative vulnerability: https://tools.cisco.com/security/center/viewAMBAAlert.x?alertId=29974</p> <p>The complete list of available protocols can be found at http://www.iana.org/assignments/protocol-numbers/protocol-numbers.xhtml</p>
<p>[127] NRAs should ensure that ISPs include in the contract and publish the information elements below, preferably presented in two parts (levels of detail)²⁵:</p> <ul style="list-style-type: none"> · The first part should provide high-level (general) information. The information about the IAS provided should include, for example, an explanation of speeds, examples of popular applications that can be used with a sufficient quality, and an explanation of how such applications are influenced by the limitations of the provided IAS. This part should include reference to the second part where the information 	<p>127.NRAs should ensure that ISPs include in the contract and publish the information elements below, preferably presented in two parts (levels of detail)²⁵:</p> <ul style="list-style-type: none"> · The first part should provide high-level (general) information. The information about the IAS provided should include, for example, an explanation of speeds, examples of popular applications that can be used with a sufficient quality, and an explanation of how such applications are influenced by the limitations of the provided IAS. This part should include reference to the second part where the information required by 	<p>Detailed technical parameters in contracts are of no value for end-users and will confuse them. Such information can be available at a customer portal.</p>

<p>required by Article 4(1) of the Regulation is provided in more detail. The second part would consist of more detailed technical parameters and their values and other relevant information defined in Article 4(1) of the Regulation and in these Guidelines.</p>	<p>Article 4(1) of the Regulation is provided in more detail. The second part would consist of more detailed technical parameters and their values and other relevant information defined in Article 4(1) of the Regulation and in these Guidelines.</p>	
<p>[130] Articles 4(1), 4(2) and 4(3) apply to all contracts regardless of the date the contract is concluded or renewed. Article 4(4) applies only to contracts concluded or renewed from 29 November 2015.</p>	<p>130. Articles 4(1), 4(2) and 4(3) apply to all contracts regardless of the date the contract is concluded or renewed. Article 4(4) applies only to contracts concluded or renewed from 29 November 2015.</p> <p>130. Article 4 applies only to contracts concluded or renewed from 30 April 2016.</p>	<p>It would make no sense to impose on telcos operators an obligation to amend immediately all their existing contracts. This is clearly reflected in Article 4 (4), by the explicit reference to the non-conformity of performance in conjunction with the date from which it will be introduced as contractual obligation. Article 4 (4) implies that consumers' rights for non conformity shall apply only to contracts concluded or renewed from 29 November 2015. Such provision would be meaningless if a general obligation to amend all existing contracts was imposed on the telcos operators.</p> <p>Article 4 (1) in conjunction with Recital 18 aims at facilitating consumers' informed choice, which clearly refers only to new contracts. From a practical perspective, a retrospective application could have negative repercussions on existing contractual relationships and could be highly detrimental. Adjustments of existing contracts would require explicit agreements of every customer and would imply the right for each customer to terminate the contract. Providers can only agree new performance parameters within new contracts.</p>
<p>[131] NRAs should ensure that ISPs include in the contract and publish a concise and comprehensive explanation of traffic management techniques applied in accordance with the second and third subparagraphs of Article 3(3),</p>		<p>Information on traffic management measures has to be general and product-specific in order to allow flexibility for IAS providers in their business development and in order to facilitate innovation and</p>

<p>including the following information:</p> <ul style="list-style-type: none"> • how the measures might affect the end-user experience in general and with regard to specific applications (e.g. where specific categories of traffic are treated differently in accordance with Article 3). Practical examples should be used for this purpose; • the circumstances and manner under which traffic management measures possibly having an impact as foreseen in Article 4(1) letter (a) are applied; • any measures applied when managing traffic which uses personal data, the types of personal data used, and how ISPs ensure the privacy of end-users and protect their personal data when managing traffic. <p>[132] The information should be concise and comprehensive. The information should not simply consist of a general condition stating possible impacts of traffic management techniques that could be applied in accordance with the Regulation. Information should also include, at least, a description of the possible impacts of traffic management practices which are in place on the IAS.</p>	<p>[132] The information should be concise and comprehensive. The information should not simply consist of a general condition stating possible impacts of traffic management techniques that could be applied in accordance with the Regulation. Information should also include, at least, a description of the possible impacts of traffic management practices which are in place on the IAS.</p>	<p>introduction of new services. Otherwise, even minor changes in future traffic management may lead to unreasonable obligation for contract amendments.</p>
<p>[134] Besides speed, the most important QoS parameters are delay, delay variation (jitter) and packet loss. These other QoS parameters should be described if they might, in practice, have an impact on the IAS and use of applications. NRAs should ensure that ISPs provide information which is effects-based. Users should be able to understand the implications of these parameters to the usage of applications and whether certain</p>	<p>[134] Besides speed, other the most important QoS parameters such as are delay, delay variation (jitter) and packet loss could. These other QoS parameters should be described if they might, in practice, have an impact on the IAS and use of applications. NRAs should ensure that ISPs provide information which is effects-based. Users should be able to understand the implications of these parameters to the usage of applications and whether certain</p>	<p>Detailed technical parameters in contracts are of no value for end-users and will confuse them. Such information can be available at a customer portal.</p>

<p>applications (e.g. interactive speech/video or 4K video streaming) cannot in fact be used due to the long delay or slow speed of the IAS. Categories of applications or popular examples of these affected applications could be provided.</p>	<p>applications (e.g. interactive speech/video or 4K video streaming) cannot in fact be used due to the long delay or slow speed of the IAS. Categories of applications or popular examples of these affected applications could be provided. It should also be made clear to the customer what parts of the service the ISP is not responsible for (user's equipment, weather and environmental conditions, parts of the network outside the ISPs control, delivery of traffic beyond the ISP network) all of which affects the end to end experience.</p>	
<p>[137] In order to empower end-users, speed values required by the Article 4(1) letter (d) should be specified in the contract and published in such a manner that they can be verified and used to determine any discrepancy between the actual performance and what has been agreed in contract. Upload and download speeds should be provided as single numerical values in bits/second (e.g. kbit/s or Mbit/s). Speeds should be specified on the basis of the IP packet payload, and not based on a lower layer protocol.</p>	<p>137. In order to empower end-users, speed values required by the Article 4(1) letter (d) should be specified in the contract and published in such a manner that they can be verified and used to determine any discrepancy between the actual performance and what has been agreed in contract. Upload and download speeds should be provided as single numerical values in bits/second (e.g. kbit/s or Mbit/s) or as a percentage of the lower-layer speed (i.e. 80% of DSL sync) in case of variability due to laws of physics (i.e. DSL speed vs distance). Speeds should be specified on the basis of the IP packet payload, and not based on a lower layer protocol.</p>	<p>The download/upload speed on the basis of IP packet payload is directly affected by the DSL sync speed. Various measurements have shown max speed values at the IP level to be around 20% lower than the speed values at the DSL level due to the ATM/PPP overhead, not-optimal MTU and fragmentation. Since the DSL speed depends on the physical distance between the subscriber's home and the Local Exchange, the same is expected to happen for the IP speed. The DSL sync speed can be verified by the subscriber either through the modem GUI or through a customer portal. It's obvious that this variability cannot be described in a written contract and for this reason a reference to a percentage is proposed.</p> <p>Effective and proportional measures should be examined by NRAs, taking into account technology limitations. <u>It is essential that BEREC expressly acknowledges the LLU technology limitations and suggests a range of reasonable and appropriate compromises to the NRAs.</u></p>
<p>[141] NRAs could set requirements</p>	<p>141.NRAs could set requirements on</p>	<p>Since the maximum speed is</p>

<p>on defining minimum speed under Article 5(1), for example that the minimum speed could be in reasonable proportion to the maximum speed.</p>	<p>defining minimum speed under Article 5(1), for example that the minimum speed could be in reasonable proportion to the maximum speed.</p>	<p>variable, it would be beneficial to the subscriber if the minimum speed was fixed.</p>
<p>[148] NRAs could set requirements on defining advertised speeds under Article 5(1), for example that the advertised speed should not exceed the maximum speed defined in the contract,</p>	<p>148. NRAs could set requirements on defining advertised speeds under Article 5(1), for example that the advertised speed should not exceed the maximum speed defined in the contract,</p>	<p>In case of DSL, due to the reasons mentioned above, advertised speeds should continue to be in the form of “up to x Mbps” (i.e. up to 24 Mbps), following closely the relevant technology limits. Commercial communications and contracts should continue to use the current form because it is impractical (if not impossible) to use a non-fixed value instead.</p>
<p>[155] Remedies available to consumers as described in Article 4(1) letter (e) are defined in national law. Examples of possible remedies for a discrepancy are price reduction, early termination of the contract, damages, or rectification of the non-conformity of performance, or a combination thereof. NRAs should ensure that ISPs provide consumers with information specifying such remedies.</p>		<p>The Regulation’s general information requirement in Art. 4 (1) letter (e) is explicit. According to our opinion, there is no need for further guidelines on this point. Effective and proportional measures may be examined by NRAs, if necessary according to national laws.</p>
<p>[156] NRAs should ensure that ISPs adhere to certain good practices regarding procedures for addressing complaints, such as:</p> <p>~ informing end-users in the contract as well as on their website, in a clear manner, about the procedures put in place, including the usual or maximum time it takes to handle a complaint;</p> <p>~ providing a description of how the complaint will be handled, including what steps the ISP will take to investigate the complaint and how the end-user will be notified of the progress or resolution of the complaint;</p> <p>~ enabling end-users to easily file a complaint using different means, at</p>	<p>[156] NRAs should ensure that ISPs adhere to certain good practices regarding procedures for addressing complaints, such as:</p> <ul style="list-style-type: none"> • informing end-users in the contract as well as on their website, in a clear manner, about the procedures put in place, including the usual or maximum time it takes to handle a complaint; • providing a description of how the complaint will be handled, including what steps the ISP will take to investigate the complaint and how the end-user will be notified of the progress or resolution of the complaint; • enabling end-users to easily file a complaint using different means, at least 	<p>BEREC Guidelines go far beyond the Regulation. Already established measures provide sufficient tools to handle complaints. Appropriate, proportional and reasonable measures may be examined by NRAs, if necessary.</p>

<p>least online (e.g. a web-form or email) and at the point of sale, but possibly also using other means such as post or telephone;</p> <p>~ providing a single point of contact for all complaints related to the provisions set out in Article 3 and Article 4(1), regardless of the topic of the complaint;</p> <p>~ enabling an end-user to be able to enquire about the status of their complaint in the same manner in which the complaint was raised;</p> <p>~ informing end-users of the result of the complaint in a relatively short time, taking into account the complexity of the issue;</p> <p>~ informing the end-user of the means to settle unresolved disputes according to national law if the end-user believes a complaint has not been successfully handled by the ISP (depending upon the cause of the complaint, the competent authority or authorities under national law may be the NRA, a court or an alternative dispute resolution entity etc.).</p>	<p>online (e.g. a web-form or email) and at the point of sale, but possibly also using other means such as post or telephone;</p> <p>• providing a single point of contact for all complaints related to the provisions set out in Article 3 and Article 4(1), regardless of the topic of the complaint;</p> <p>• enabling an end-user to be able to enquire about the status of their complaint in the same manner in which the complaint was raised;</p> <p>• informing end-users of the result of the complaint in a relatively short time, taking into account the complexity of the issue;</p> <p>• informing the end-user of the means to settle unresolved disputes according to national law if the end-user believes a complaint has not been successfully handled by the ISP (depending upon the cause of the complaint, the competent authority or authorities under national law may be the NRA, a court or an alternative dispute resolution entity etc.). Article 4(3) The requirements laid down in paragraphs 1 and 2 are in addition to those provided for in Directive 2002/22/EC and shall not prevent Member States from maintaining or introducing additional monitoring, information and transparency requirements, including those concerning the content, form and manner of the information to be published. Those requirements shall comply with this Regulation and the relevant provisions of</p>	
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	Directives 2002/21/EC and 2002/22/EC.	
<p>[158] 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).</p>	<p>[158] The relevant facts proving a significant discrepancy between the contractually agreed parameters and the generally (non-individually) monitored values 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 a monitoring mechanism. NRAs must offer a certification. The definition of certification criteria and processes must be certified by a third independent party and must be consulted with the stakeholders. As long as certification criteria and processes are not established ISPs can use own monitoring mechanisms to check performances without certification. The Regulation does not define how the certification must be done. If the NRA provides a monitoring mechanism implemented this monitoring mechanism must meet the certification criteria and be certified by a third independent party 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).</p>	<p>In order to ensure consistent and reliable monitoring results, all providers of monitoring mechanisms that are officially qualified to measure contractual compliance, including the NRA, should fall under specific and common certification criteria.</p>
<p>[170,171,172] [170] IAS performance assessment can be performed at the user or market level: ~User-level assessment: end-user measurements of the performance of IAS offers can be performed to check whether the ISP is fulfilling its contract. Measurement results are compared to the contracted</p>		<p>Any user-level assessment should take into account various factors outside IAS provider's control (in-house cabling, wifi, custom cpe, etc). BEREC should make a firm statement on the requirement for sound measurement mechanisms, in order to ensure that certified measurement mechanisms are indeed providing reliable results.</p>

<p>performance of the IAS offer.</p> <p>~Market-level assessment: user-level measurement results are summarised into aggregated values for different categories such as IAS offers, ISPs, access technologies (DSL, cable, fibre etc.), geographical area etc. Aggregated measurement results can be used for market-level assessments.</p> <p>[171] NRAs can use market-level assessment for the regulatory supervision envisaged by Article 5(1) to:</p> <p>~cross-check that the published information is consistent with monitoring results (see paragraph 173);</p> <p>~check that specialised services are not provided at the expense of IAS;</p> <p>~check that the performance of IAS is developing sufficiently over time to reflect advances in technology.</p> <p>[172] Market-level assessment data can also be used for:</p> <p>~transparency purposes, by publishing statistics as well as interactive maps showing mobile network coverage or average performance in a geographic area for fixed access networks;</p> <p>~considering the availability of different IAS offers or offer ranges provided by ISPs, as well as their penetration among end-users;</p> <p>~assessing the quality for a specific type of IAS, e.g. based on an access technology (such as DSL, cable or fibre);</p> <p>~comparison of IAS offers in the</p>		
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<p>market;</p> <p>~investigating possible degradation caused by specialised services.</p>		
<p>[174] In order to ensure compliance with the Regulation, and to promote the continued availability of non-discriminatory IAS at levels of quality that reflect advances in technology, NRAs could decide to:</p> <p>~ require an ISP to take measures to eliminate or remove the factor that is causing the degradation;</p> <p>~set requirements for technical characteristics to address infringements of the Regulation, for example, to mandate the removal or revision of certain traffic management practices;</p> <p>~impose minimum QoS requirements;</p> <p>~impose other appropriate and necessary measures, for example, regarding the ISPs' obligation to ensure sufficient network capacity for the provision of high-quality non-discriminatory IAS (Recital 19);</p> <p>~issue cease and desist orders in case of infringements, possibly combined with periodical (daily/weekly) penalties, in accordance with national law;</p> <p>~impose cease orders for specific specialised services unless sufficient capacity is made available for IAS within a reasonable and effective timeframe set by the NRA, possibly combined with periodical (daily/weekly) penalties, in accordance with national law;</p> <p>~impose fines for infringements, in accordance with national law.</p>		<p>BEREC Guidelines go far beyond the Regulation. Enforcement by the NRA should take place taking into account the competences of the NRA according to national laws. We suggest the inclusion of an explicit general reservation "as allowed by applicable national laws".</p>