Joint GSMA / ETNO response to BEREC Consultation on

Net Neutrality Regulatory Assessment Methodology

January 2021

1. Introduction

ETNO and the GSMA, who represent the telecoms sector in Europe, welcome the opportunity to comment on BEREC's Draft Net Neutrality Regulatory Assessment Methodology. The methodology will provide important guidance on how to monitor Quality of Service (QoS) for access to the internet, which is a crucial milestone to implement and enforce Regulation 2015/2120 on the Open Internet.

We believe that customers deserve meaningful consumer information, trust in internet access services and the full confidence that service providers operate under legal certainty. We believe that it is essential to ensure that the implementation of Regulation 2015/2120 results in greater clarity for consumers and that it does not create unfair or undue burden on our sectors, at a time in which we are focussed on increasing our investment and quality of networks.

GSMA/ETNO welcome BEREC's commitment that quality of service measurement parameters and methodologies must be based on already existing consolidated technical and scientific foundations. The selection of parameters that are considered relevant and representative from the end user perspective to measure Internet access service (IAS) quality is already set in the relevant ETSI standards as defined by the STQ Technical Committee. Equally we welcome BEREC's finding that different measurement tools serve different objectives. Monitoring customers' experience about the IAS or applications is very different compared to the monitoring of contractual compliance of IAS providers. These differences must be translated into the methodology or rather different methodologies advanced in the methodology.

BEREC should acknowledge that a range of NRAs have already implemented monitoring systems, also due to legal obligations based on Art. 4 of the Open Internet Regulation. Where these established systems already deliver sufficient results, NRAs should refrain from readjustments that burden industry and may confuse customers who have got used to the established tool.

ETNO/GSMA would also refer BEREC to our earlier response to consultation issued 5 July 2017(BoR PC03 (17) 08, the views expressed in that response should also be read as part of this response.

2. Measuring Internet access service quality

ETNO and the GSMA welcome the approach detailed in section 3 of the consultation and welcome the efforts made by BEREC to find a methodical approach to assessing service quality. ETNO/GSMA fully support BEREC's view that measurements must be accurate particularly if regulatory or increased transparency initiatives such as maps are to be deployed within the measurement data. It is therefore critical that the overall speed measurement methodology follows industry standard approaches on measurement. No speed measurement based on customer terminals can be considered reliable and where it is important to ensure the test does not frustrate or add complexity to the end user the data needs to collect in a systematic fashion which minimise factors either software or hardware which may impact the end user speed, but which are outside the control of the operator. No conclusion should be drawn from speed tests, packet loss or latency issues if the data speed testing process is not designed to ensure it is testing the unmitigated speed available to the end user.

The recommended tools such as web browsers have significant weaknesses regarding interference from end-user environment. If such tools are deployed, they would need to be counterbalanced through smart solutions if the tool is meant to be accurate. ETNO/GSMA note the BEREC use of HTTP(s) which remains a concern as BEREC should consistently refer to HTTPS as a preference compared to HTTP.

Operators can only control their own networks. Accordingly, measurements should preferably be done within the ISPs' networks. BEREC's view that testing should be using web browser or on-device app remains a concern as the measurement is located outside of ISPs' networks, it is of utmost importance that conditions are alike, such as regarding connectivity. Additionally, new functionalities introduced by device manufactures and thus outside the control of IAS providers, such as Apple's Privacy Relay, introduce a new paradigm in how users access the Internet through apps and browsers, potentially changing performance of IAS. These new functionalities, that further difficult the measurement of IAS QoS, should be taken into account on BEREC's assessment (see further comments below in end user measurement).

With respect to 3.1.1. (overall methodology), we would add the following comment:

The updated guidance indicates that, "*where a speed measurement is initiated by a human end-user, it must be possible to execute it via the equipment that they usually use to access the IAS. No artificial restrictions in the methodology should prevent the measurement from running on other hardware such as games consoles/modem clients/TV-boxes etc.*".

We are concerned about this requirement on two grounds:

1. It is disproportionate, unreliable, and unnecessary. To extent an end-user is using an internet connection, likely home broadband, to connect a device such as a games console, or Smart TV, then that broadband is also very likely being used to provide connectivity to e.g. a laptop or smartphone, through which it is already possible to test IAS.

2. It is impractical. Many of the potential devices used to access the internet, will have neither (i) access to a browser-based speed-test application; (ii) an in-built speed-testing application. To facilitate this requirement, operators would likely have to work with numerous device manufacturers / software developers to ensure that this capability is built-in to new end-user devices. It would be even more challenging for existing devices.

3. Packet loss measurements

ETNO and the GSMA fully agree that samples of measurements need to be sufficiently high, including different sizes of data packages to provide the full picture of networks' performance (e.g., large packages illustrate availability of higher network performance) and measurements should be done symmetrically over the whole day, including peak hours, at different days during the week. This is particularly important to ensure that measurements are representative when it comes to contractual compliance.

4. Detecting traffic management practices that impact individual applications

ETNO/GSMA have stated in previous submissions we are opposed to associate aspects of higher level of the network, such as for example the blockage of TCP/UDP ports, to the features of the IP connectivity provided by the IAS. In fact, the management of TCP/UDP level and higher levels usually does not concern the IAS service, apart from totally legitimate functionalities such as the NAT usage. In general, the adoption of protection measures such as virus checkers and parental controls has increased year over year and have an impact on connectivity testing. Consequently, BEREC and NRAs should take this situation of utmost relevance when assessing traffic management practices, especially in the crowdsourcing approach, as it can easily result in incorrect conclusions.

5. End-User Environment

ETNO/GSMA welcomes the consultation discussion on the best approach to ISP speed assessment for end users. The quality of modems and end user apps, software and terminal equipment does impact the accuracy of the speed test.

In relation to mobile testing the end user terminal, its location, and the typology of the geography close to the end user are factors impacting the end user speed. ETNO/GSMA have argued before that the most reliable information on maximum speed available in mobile networks is provided through drive tests.

As noted above, GSMA / ETNO appreciates the recognition that a variety of external factors can impact the accuracy of IAS quality measurements. For example, against both fixed network end-user environment, and the mobile network end-user environment, the activation of background software like VPNs or local DNS manipulation, may impact the performance level achievable by the measurement device.

We also appreciate that in Chapter 4, with respect to measurements on individual applications, the Guidelines note that the end-user environment (and in particular local firewalls and security software) may impact the results.

However, to add to these observations, we would like to highlight a specific issue we see with 'new' forms of VPN that are being adopted, such as Apple Private Relay ('**APR**'). Where APR is activated, there are three consequences relevant to measuring QoS for specific applications.

1. To extent that an application is impacted by APR when activated, the IAS provider loses visibility of the specific applications that end-users are accessing. It is still possible to measures metrics such as speed as a whole, but not possible to determine whether, for example, a specific application is achieving the speed or other quality of service criteria, that would be necessary for the application to run effectively (or may have been contractually committed to).

   This is particularly problematic in scenarios where a guaranteed QoS is required for a specific application.

2. This is exacerbated by fact that the activation of APR will cause a degradation in the QoS for the application. Essentially, the activation of APR (i) introduces two additional 'hops' in the routing of the traffic, (impacting on latency), and (ii) means that, instead of the traffic handling occurring over this IAS providers network, it will be handled by Apple, where the operator has no visibility over their DNS response, transit link routing etc.

3. We further note that Apple in the context of these activities, are not currently within scope of the net neutrality framework. Therefore, if Apple are to handle an increasing share of internet browsing, then these activities will also be outside the clear ambit of the regulatory framework.

It would be beneficial, if the Guidelines made reference to these new forms of 'VPN', to provide further guidance on how to address these in IAS quality measurements."

6. IAS quality assessment methodology

In relation to measuring improvements in general IAS quality ETNO/GSMA welcome the discussion in the consultation document and the need to ensure outlying data is addressed when comparing with previous measurement data. Also, the need to ensure there is consistence in the measurement approach on mobile devices and in the surrounding measurement environment is important to ensure comparative data is accurate.

In relation to publication ETNO/GSMA would reiterate the need to explain fully the measurement process and the timeframe and confirm to readers caveats to the results which may exist and may explain IAS speed differences.

We are concerned about Section 6.4.1 which sets out that average download and upload speeds that are calculated for preceding years, could be used to 'predict' forecasting for the following years' speeds. This predictive model can then be applied in the following years to assess whether ISPs have met the predictions.

ETNO/GSMA is concerned that there is no basis in the net neutrality regulation for making such a predictive assessment. It is also not clear, what ramifications are anticipated, if ISPs (either on average or individually) do not meet the speed predictions. This is particularly concerning given that speed predictions based on previous years are not seen as an accurate predictor of network / internet access quality. If BEREC intends to maintain this section, then further clarity on *what* these predictions are being used for; and also clear caveats as to the accuracy of this data, should be included in the Guidelines.

1. <u>Measuring Impact of Specialised Services ('SpS')</u>

Section 6.4.3 of the Guidelines sets out an analysis of how to measure the effect of specialised services on IAS . It refers in large part to the BEREC Guidelines on specialised services, so our comments below refer to a combination of these and the Assessment Methodology guidelines.

We appreciate that the guidelines recognise the clear difference between measurements for mobile and fixed end-users, and the different metrics that the impact of SpS should be measured against. We also appreciate the recognition that the impact would need to be measured over a longer period than a simple snap-shot.

However, a number of practical issues remain:

1. It is clear that the burden of proof remains on the provider of the SpS to establish that there is no impact on the IAS. However, no guidance is given on how this might be done *in advance* of launch of an SpS. It would be useful if clear guidance on how limited testing in a live environment may be done, without risk of regulatory intervention.

2. Reference is made to the idea that an SpS should be under constant review by the provider, and should stop being delivered as an SpS in cases where the 'best efforts' network is capable of delivering the service. This risks a freeze on innovation, if investment is required to develop an end-to-end SpS now, which in the future must revert to using best-efforts internet. ETNO/GSMA would argue that operators should continue to offer these given that demand for these services exist.

3. With respect to mobile networks, as noted above we appreciate the recognition that there are challenges in ascertaining the actual impact of an SpS on the mobile network. In particular, the broader Net Neutrality Guidelines reflect the recitals in the Regulation, setting out that the general quality of IAS for end-users should not be deemed to incur a detriment where the aggregate negative impact of specialised services is "unavoidable, minimal and limited to a short duration".

   It would be helpful if, in the Methodology Guidelines, further guidance was given on these criteria, to support operators in making this assessment.

All thing unchanged, we expect the number of services that qualify as 'specialised services' to increase in the future. This will result in the issues identified above being exacerbated further. In particular, placing a burden of proof on the provider to run assessments on a case by case and rolling basis will not be sustainable.

Any update to the Guidelines should reflect this.

7. Individual Results assessment & Certified monitoring mechanism

ETNO/GSMA would reiterate in relation to normally available speed that this KPI is very problematic. No speed can be consistently ensured for a given end user. Equally Advertised speed relates to a market level speed and does not refer to speeds consistently delivered to all end users.

ETNO/GSMA welcome BERECs confirmation the regulations do not require member states to certify a monitoring mechanism. This area is the subject of much difference in member states and ETNO/GSMA welcome BERECs view that several conditions and evidence need to be available if end users are to be able to conclude their contract IAS is not what is advertised or contractually offered. The process of implementing the consumers right to remedies in relation to an ISP not achieving their contractual speed is a matter for member states and NRAs to consider.

About GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

About ETNO

ETNO (European Telecommunications Network Operators' Association) represents Europe's telecommunications network operators and is the principal policy group for European e-communications network operators. ETNO's primary purpose is to promote a positive policy environment allowing the EU telecommunications sector to deliver best quality services to consumers and businesses.

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