05 July 2017

Response

Cable Europe response to the consultation on BEREC's draft report on Net Neutrality Regulatory Assessment Methodology

Regulation 2015/2120 and BEREC NN Guidelines

Regulation 2015/2120 has mandated BEREC to produce a set of guidelines on the implementation of the Net Neutrality provisions, which were published in August 2016.
The guidelines have been an extremely important instrument that guarantees a consistent application of Regulation 2015/2120 across all Member States. Therefore, the report of BEREC on Net Neutrality Regulatory Assessment Methodology is a crucial element to maintain the aimed consistency.

Cable Europe's comments below relate to selected topics raised in the consultation document and in the preparatory work that anticipate this draft report.

The present draft report aims at providing NRAs guidance in the monitoring and supervision of the net neutrality provisions of the Regulation. This activity will be based on various net neutrality measurement tools and harmonised measurement methodology for quality of service indicators.

Cable Europe believes that the solutions already available on the market to measure the Internet Access Service have flaws and generate biased results. One of the best examples is the case of crowdsourcing initiatives. Since these methods only execute partial measurements, i.e. no measurement end to end, the result will necessarily be incomplete. **Any measurement should be based on a technical specification that is technologically agnostic and that generates consistent results**. Therefore, Cable Europe welcomes the concern of BEREC that end-users should be duly informed about the various limitations that can impact QoS measurements.

Measurement objectives

The measurements described on the present draft report may have 3 different objectives: **(a)** Establishment of what the 'general quality of IAS' is **(b)** Detection of traffic management practices which may or may not be allowed **(c)** To enable measurement tools to be part of a monitoring mechanism certified by the NRA.

Regarding the first objective - measuring Internet access service quality – the report recognises the importance of mitigating "*confounding factors which are internal to the user environment*". Cable Europe supports this remark made by BEREC because it is extremely important to provide consistency and reliability to the information collected. This information will eventually be used by consumers to verify the commitments made by their Internet Access Service provider and they need to be reliable. The measurements proposed to achieve this objective will have to focus only on the network elements that the provider has control, otherwise external factors may distort the results.

On what concerns the second objective BEREC proposes various connectivity measurements that might provide evidence of a **Traffic Management** practice and if it is lawful. However, the proposed measurements (Blocked ports, IP addresses blocking, DNS manipulation and Detection of an HTTP proxy) have a common denominator described by BEREC that is critical – all of them might be significantly impacted by the end user environment. This weakness raises serious doubts to the effectiveness of the measurements and its validity. When detecting traffic management practices that impact individual applications, BEREC proposes an assessment based on 2 specific use cases - Web browsing and Video Streaming.
The use cases selected by BEREC present risks of providing incomplete data, *e.g*., *"4.2.2 Video streaming […]The drawback of this approach is that it is difficult to differentiate between video site performance and ISP performance as some video sites might use different streaming servers for different ISPs."* which is extremely relevant in a context where accuracy is of paramount importance. Cable Europe recommends that these connectivity measurements should disclaim to what extent they are precise on the cause identification.

Finally, BEREC also proposes a **monitoring mechanism certified by the NRA**. As in any other certification process, it should be based on a technical specification (standard). Cable Europe considers that a mechanism that can be used to confirm if a contract is being fulfilled requires certainty which can only be obtained with objective rules. Having this objective in mind, Cable Europe believes that a standardisation work in ETSI can be of extreme importance to provide strong and robust methodology to the monitoring mechanism.

Cable Europe recommendations

Measurement methodology - Individual applications

It is commonly accepted that individual applications that measure traffic management are not reliable. Amongst various reasons, individual applications can't execute measurements without the influence of the end user environment. This leads us to the conclusion that **NRAs should define the measurement process based on a technical specification**. Only with the selection of this

specification it will be possible to monitor objectively the Net Neutrality obligations of ISPs. Upon the request from NRAs, the Internet Service Providers must show a proof of compliance.

Implementation of a QoS measurement system

BEREC work should take three different elements into account: Governance, Security and System Architecture.

Cable Europe believes that the question of **governance** doesn't pose any difficulty. This should consist on NRAs requiring proof of compliance that KPIs are being accomplished as proposed. The proof will cover the KPIs that are already foreseen in the regulation as well as those that might be additionally required under the scope of the same regulation. The verification will be performed with the methodology prescribed by the NRAs. ISPs must provide the information that will result from their network measurements, taking the regulation limits as the general principle. This is the same process already conducted to provide similar level of information like business statistics that operators report to NRAs. If the NRA believes that there is a need of further verification it should then promote an audit performed by a third party to check data validity. When defining the required KPIs, the verification must always be conducted against the specification followed by NRAs.

KPI monitoring process
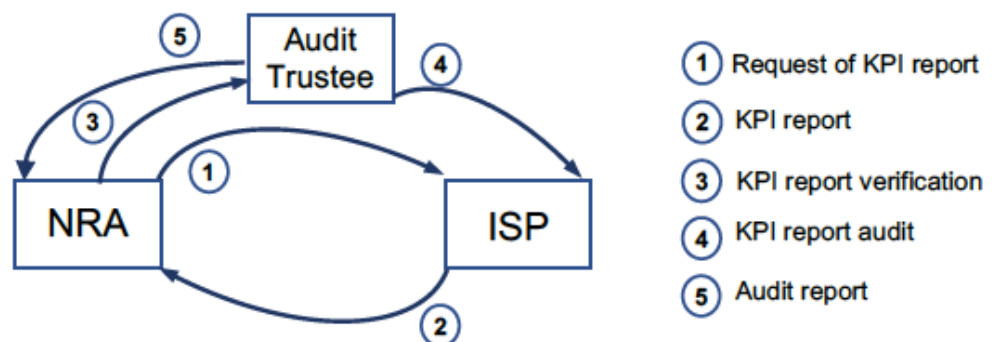
There are at least three examples of the model that is the most adequate to fulfil the regulation requirements.

The <u>first example</u> is the one where NRAs may want to verify that certain regulatory procedures, like maximum time of number portability, are being followed. On this case, an NRA mandates an external company to audit the process and verify its correct execution.

The <u>second example</u> is the one competition Authorities also use. Once merger conditions are defined and the specific KPIs are approved, companies must provide the required information or

act accordingly. If the regulator wants to verify that obligations are being fulfilled, it mandates a trustee that can have full access to the process within the operator's activity.

The <u>third example</u> is the one used between content distributors and content rights' holders. Whenever the licensing is based on the number of subscribers, content distributors must provide regular statistics. Content rights' holders are entitled to require an audit that verifies that data provided is consistent with the exiting number of subscribers.

Security is the second element that BEREC should consider. This is one of the most critical aspects of this process. The solution that BEREC is looking for must foresee a balance between security and legal obligations that ISPs have. On the one hand, ISPs have cybersecurity teams that use monitoring tools to prevent any unlawful intrusion. If the tools that verify traffic management are included in this category customers might be blocked for using tools usually associated with hackers. On the other hand, if an ISP executes a judicial mandate to perform a lawful interception, any monitoring tool that the customer may use to identify traffic management practices may provoke an unwanted result – the surveillance might be discovered.

Finally, the **architecture** of any monitoring process and tool must be assured by the ISP, which is responsible to provide the information to the NRA. Depending on the type of network, it is the ISP responsibility to guarantee that the KPIs are measured and a report is provided to the NRA. The KPIs request just must be based on the mechanism that NRAs must certify. The certification and the technical specification against which the certification is performed is the key.

Conclusion

There are two dimensions that need to be considered:

1) <u>The level of transparency implemented by ISPs</u>.
   Regulation 2015/2120 determined that additional information should be provided to consumers:
   a) Information of how Traffic Management can impact the quality of the internet access service;
   b) Explanation of any volume limitation, speed or any other parameter may impact on the internet access service;
   c) how specialised services can impact the internet access service;
   d) an explanation of various KPIS related to speed;
   e) a list of the remedies that customers have in order to act on discrepancies between the proposed service and the actual level of service.

   These requirements can be verified regularly by checking the general terms and conditions proposed to customers.

2) <u>A service degradation that should originate a verification</u>.
On this case, as foreseen by Regulation 2015/2120, NRAs must always act based on sustained complaints from consumers. Due to various reasons, NRAs and ISPs must act preventively to educate consumers to do a trouble shooting before launching an investigation. It is extremely important that consumers can understand in advance if the reason of complain might be originated by their own equipment.

Society faces today a new subject that is causing an information overload. The Attention Economy is becoming critical on every activity and the electronic communications ecosystem is providing users with excessive information. Information must be meaningful and should, above all, be actionable. Any other information besides that one will generate noise and mislead users.

NRAs and ISPs must work together to avoid this unwanted result, namely promoting users' education. ISPs have an undeniable incentive to make users understand the data they receive and understand where is the origin of the problem. *e.g.* many older laptops can only enable speeds up to 100 Mbps. Nevertheless, when a customer subscribes a higher service, the first reaction is to blame the ISP for not delivering the subscribed service. In the end, if the customer was aware of this limitation it would either change the equipment or adjust is service to his equipment limitation.

There are a multitude of reasons to impact the subscribed service delivery and these causes should be continuously communicated to consumers.

NRAs should have a portfolio of tools and methods to verify Net Neutrality compliance. **According to Regulation 2015/2120, the toolkit to perform such task must be certified and that can only be performed against a technical specification.**
Cable Europe believes that this technical specification must be technologically agnostic to be applied consistently amongst all Member States.

To fulfil this objective - having a technical specification to certify the measurement tool - a work item is going to be developed in ETSI. The output will be a technical standard that can bring objectivity to the process. Because ETSI is the only (ESO) European Standard Organisation that can fulfil this task, Cable Europe is fully committed to actively contribute to this process and is looking forward for its conclusion. This solution has significant advantages when compared with others considering ETSI gathers technical expertise from all quadrants (Manufacturers, National Standardisation Organisations and Operators) which is a key element to promote such an initiative that will introduce certainty into this process.

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About Cable Europe

Cable Europe is the trade association that connects leading broadband cable TV operators and their national trade associations throughout the European Union. The regulatory and public policy activities of Cable Europe aim to promote and defend the industry's policies and business interests at European and international level. The European cable industry provides high speed broadband internet, TV services, and telephony into the home of 64.5 million customers the European Union.

This paper represents the views of the full members of Cable Europe, and not necessarily those of our associate members, partners or affiliates.