

# From Net neutrality to Open Internet. Which challenges for regulation?

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# Summary

Net neutrality: what is it and why it matters

Technical aspects

Commercial and consumer aspects

The implementation of TSM regulation in EU

Towards an Open Internet concept

# Why it matters

- Net neutrality refers to a debate about the way that Internet Service Providers (ISPs) manage the data or 'traffic' carried on their networks when data is requested by broadband subscribers (known as "end-users" under EU law) from providers of content, applications or services (CAPs) such as YouTube or Spotify, as well as when traffic is exchanged between end-users.
- The best effort internet is about the equal treatment of data traffic being transmitted over the internet, i.e. that the 'best efforts' are made to carry data, no matter what it contains, which application transmits the data ("application-agnosticism"), where it comes from or where it goes.
- The benefits of the best effort internet notably include the separation between application and network layers of the internet. This separation enables innovation of applications independent of the ISP, thereby enhancing end-user choice

# BEREC's take on NN



- BEREC has been deeply involved with the subject since 2010, exploring such issues as transparency, competition issues, quality of service, quality monitoring and IP interconnection in the context of net neutrality. BEREC also carried out an investigation into traffic management practices and published research into how consumers value net neutrality. Furthermore, BEREC provided input to the EU institutions during negotiations on the Telecoms Single Market Regulation which has established these new rules.

# Net neutrality: opposing views



A critical vision of NN: «it serves the purpose of the Over the top players, at the expense of traditional telcos»



A more optimistic view of NN: «without NN regulation, the citizen (and the consumer) would see their options drastically reduced; civil, social and economic liberties would be affected negatively, as their right to an Open Internet is dampened»



NN can be viewed as an ex-ante set of rules to mitigate the power of operators and resist their incentives to reduce the benefits for the consumers of an open Internet, in terms of access, free choice of terminals, quality and security of traffic. (es blocking VOIP, tethering)

# NN in the EU

- EU law sets the principle of 'open internet access', i.e. *"common rules to safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end-users' rights"*.
- The provisions of the [Telecoms Single Market Regulation](#) (TSM - Regulation 210/2015) apply in all EU countries since April 2016, and require that:
  - end users have the **right to access and distribute** legal content, applications and services of their choice;
  - **agreements** between providers and end-users for internet access services **do not include technical or commercial conditions that could prevent** end-users from exercising their rights.
- BEREC issued [guidelines](#) for regulators on the implementation of the net neutrality rules.

# BEREC Opinion (Dec 2018)

## On commercial practices

- No substantive changes are needed to the current text of the Guidelines. However, BEREC considers that some further clarifications could be provided so that consistency in the application of the Regulation by NRAs continues to be ensured in the future.

## On emerging 5G technologies

- According to BEREC's current understanding and analysis, the Regulation seems to be leaving considerable room for the implementation of 5G technologies, such as network slicing, 5QI and Mobile Edge Computing. To date, BEREC is not aware of any concrete example given by stakeholders where the implementation of 5G technology as such would be impeded by the Regulation. As with all other technologies, the specific use of 5G technologies must be assessed on a case-by-case basis under the Regulation. BEREC invites stakeholders to engage in informal dialogue with NRAs if stakeholders experience uncertainty about whether a specific use of a 5G technology complies with the Regulation. In 2019, BEREC will continue its regulatory assessment of 5G in a report due in Q4. This may include further developing regulatory assessment of 5G technologies in relation to net neutrality beyond this Opinion.

## On the consistent application of the Regulation

- With the clarification of the Guidelines in 2019, BEREC will continue to strive for consistency in the application of the Regulation. It intends to do so by clarifying the Guidelines where necessary, and by providing a step-by-step assessment methodology for zero-rating cases.

# Regulators' responsibility



The [TSM regulation](#) requires NRAs to “*closely monitor and ensure compliance*” with the new rules on net neutrality. The NRAs have to:



**monitor ISPs' activities**, by analysing the market, conducting technical measurements and gathering information from various sources;



**intervene** in case of undue degradation of service by ISPs and impose appropriate **fin**es if needed; and

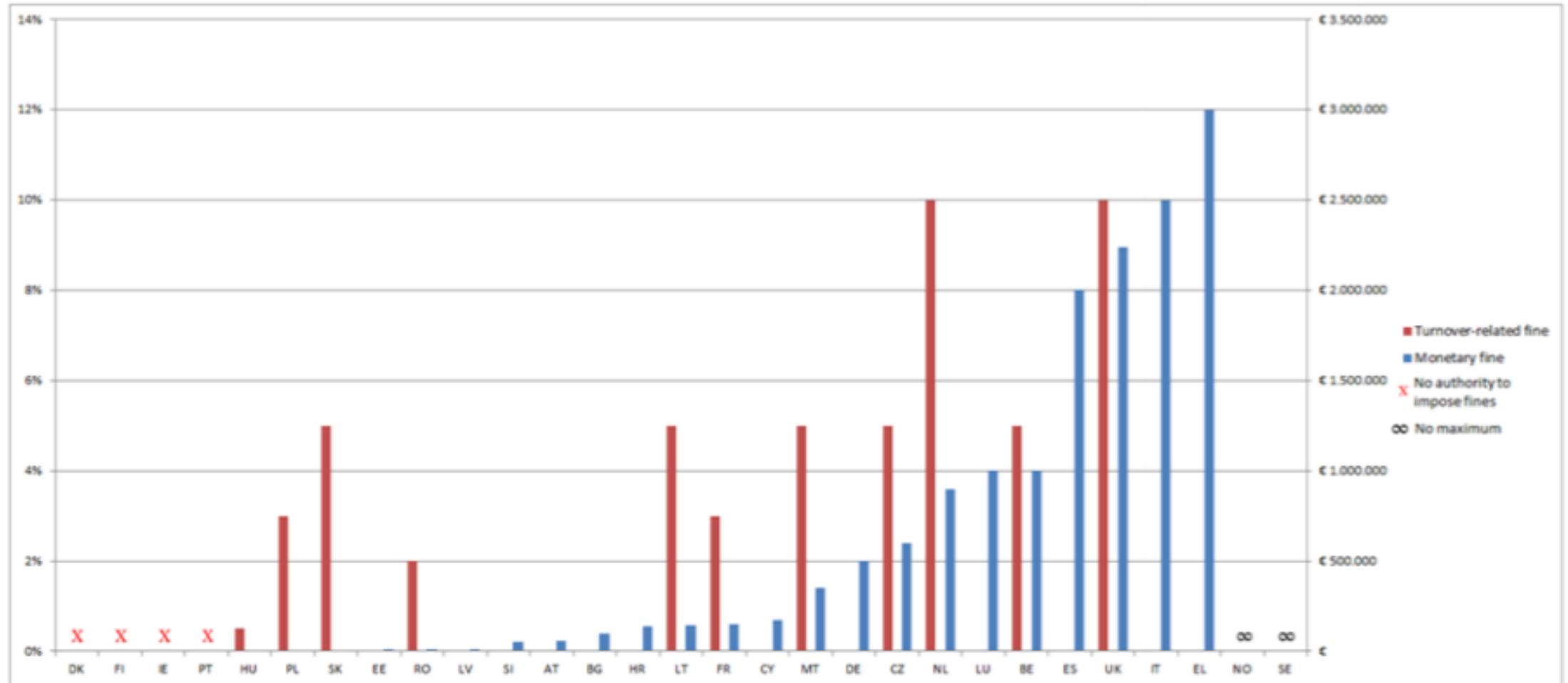


**report** annually to BEREC and the Commission on the implementation of the open internet rules of the TSM Regulation.

## Three years after...

- The [BEREC guidelines](#) on the implementation of these net neutrality provisions entered into force on 30 August 2016. BEREC [plans](#) an update of these guidelines in 2020.
- On 30 April 2019, the Commission carried out an evaluation of the net neutrality elements of the TSM Regulation, as it was required to do three years after implementation.
- The Commission found that the current regulations are appropriate and effective, with operators correctly applying the provisions.
- The Commission will not propose amendments to the TSM, carrying out another evaluation by April 2023 at latest.

Figure 1: Overview of maximum fines (turnover-related and monetary)<sup>25</sup>



# Not the same everywhere

- In the United States, in December 2017 the regulator, the Federal Communications Commission (FCC) repealed its 2015 net neutrality rules ('Open Internet Order'). Many separate lawsuits were filed seeking to challenge the FCC's 2017 decision to end net neutrality, and the US Court of Appeals for the District of Columbia Circuit is now presiding over the consolidated actions. In addition, despite the FCC's intention to enforce its pre-emption authority over US state laws, some US states introduced net neutrality laws.



# Zero rating

- Zero rating offers exempt specific types of traffic (for example to access a specific application) from the data cap included in the end user's subscription. It can bring end-user benefits, like assuring free access to specific apps. However, it also raises some discrimination concerns, like unfair competition for other apps which are not zero-rated.
- [TSM Regulation](#):  
The Regulation does not explicitly ban zero rating, but requires regulators to intervene on a case-by-case basis when end users' choice is materially reduced.
- [BEREC guidelines](#):  
The guidelines set criteria for assessing these practices (ISP market position, scale of the practice). Some practices clearly infringe the TSM rules and are prohibited (e.g. when all applications except the zero-rated one are blocked or throttled once data cap is reached). BEREC plans to update the guidelines in 2019 to include a step-by-step method to assess zero-rating cases.

## Case-by-case approach:

- Most regulators that intervened on zero rating offers followed the case-by-case approach suggested by EU law (see visual below).  
NRAs have generally rejected offers where access to the zero rated service(s) was not blocked or slowed down once the data cap included in the package was reached.  
In Germany, Portugal and Sweden, NRAs have also taken position on offers which did not comply with the roam like at home (RLAH) principle and limited consumers from accessing content of zero rated services when abroad.  
The German and Austrian regulators (BNetzA and TKK) also prohibited the bandwidth limitation applied to zero-rated streaming products, in comparison with other services.
- Netherlands:  
The Dutch government removed the general ban on zero rating from the Dutch Telecommunications Law on 1 July 2018 after a court declared the Dutch law to be void on this point

## NRAs decisions on zero rated (ZR) offers based on different issues:



Access to ZR apps once the data cap is reached?



Access to ZR apps while roaming abroad?



Bandwidth limitation of ZR apps?



Offers approved



Belgium Norway Netherlands



Offers rejected



Slovenia Czech Republic  
(Offers with a single ZR app only)



Hungary Italy Portugal Sweden



Germany Portugal Sweden



Germany Austria

# Two examples

	Specific regulation or guidance on zero rating	Intervention by NRA	Justification	Current availability of 'zero rating' plans
Austria	No	Yes The Austrian regulator TKK adopted a decision on 18 Dec. 2017 prohibiting the bandwidth limitation applying to the new zero-rated product A1 Free Stream offered by A1 Telekom Austria (Flash).	TKK decided that this bandwidth limitation infringes article 3.3 of the TSM Regulation which requires all traffic to be treated equally. In the regulators' view, the bandwidth limitation cannot be justified as a "reasonable traffic management measure".	Yes A1 Free Stream offer is still available. A1 Telekom Austria does not apply traffic shaping while its appeal against the TKK decision is pending.
Belgium	No	Yes <b>Proximus - zero rating</b> BIPT investigated zero rating offers by Proximus where the end user can select one favourite application out of six. The data consumption for this application will not count towards the user's monthly data cap. BIPT concluded that these offers are compatible with the rules on net neutrality. (Flash) <b>Proximus - sponsored data</b> Between 24 March 2017 and 21 Nov. 2017 Proximus ran a pilot test for sponsored data with a limited number of users. The trial was open to all interested sponsors. Two banks, a supermarket, a utility company, a job seeker platform and a ready meal delivery platform participated. They paid for the data used by their respective apps up to a limit. End users were informed when they reach the limit of the sponsored data. Sponsored apps would stop working when the end user reached his data allowance. <b>Other offers</b> BIPT also reported other monitoring actions (without adoption of a formal opinion) on Proximus EPIC offer and Proximus zero rating offer during the 2018 football world cup.	<b>Proximus - zero rating</b> Proximus does not treat access to the selected favourite application differently from general internet access when the user's monthly data cap is reached. Therefore, the favourite application will also be slowed down or charged for at the same out-of-bundle tariff once the data cap is reached, depending on the user's package. The data consumption of the favourite application will not have contributed to reaching this data cap. <b>Proximus - sponsored data</b> On 25 April 2018 BIPT adopted an opinion that "it was not possible to say that the sponsoring was of such a level that it (...) would result in a material reduction of choice for the end-users". Sponsored data was not available abroad. This would have been a problem should the initiative be rolled-out commercially, but since the pilot was stopped, BIPT did not go into further detail. BIPT "believes that at the moment, by analogy, the BEREC recommendations regarding zero rating in the BEREC Guidelines can and should be applied."	Yes <ul style="list-style-type: none"> <li>Proximus offers a zero rating option for a favourite app in several of its mobile packages since 17 Oct. 2016.</li> <li>Proximus also offers a zero rating option for social, music and video apps in its Epic package since 25 June 2018.</li> <li>Proximus stopped its trial of sponsored data.</li> <li>Telenet Free G option for Wigo clients</li> </ul>

# Towards an «Open Internet» concept

## Next steps

For 2018-2020, BEREC has planned the following activities on net neutrality:

Topic	Public consultation	Timing and deliverables
Tender specification for the development of a net neutrality measurement tool ( <i>Flash</i> )	No	<ul style="list-style-type: none"><li>• 3Q 2019: adoption for launch</li></ul>
Implementation of the EU Net Neutrality Regulation (Consumer Protection <i>Table</i> )	No	<ul style="list-style-type: none"><li>• 3Q 2018: publication of report</li></ul>
Evaluation of the EU Net Neutrality Regulation	Yes (only on the consultation paper)	<ul style="list-style-type: none"><li>• 1Q 2018: adoption of consultation paper for public consultation</li><li>• 4Q 2018: adoption of opinion</li></ul>
Update of the BEREC net neutrality guidelines	Yes	<ul style="list-style-type: none"><li>• Oct. 2019: public consultation</li><li>• Adoption of the updated guidelines: expected during first BEREC plenary meeting of 2020</li></ul>

 delayed

# Regulatory challenges

## BEREC's input on the review of the EU net neutrality rules and BEREC guidelines - December 2018

Based on its [opinion](#) of 6 December 2018, which serves as input for the review by 30 April 2019, BEREC “*does not recommend the review of the regulation [EU Net Neutrality Regulation - Cullen International] in the foreseeable future*”, according to BEREC chairman Johannes Gungl during a public debriefing on 13 December 2018.

In BEREC’s opinion, the regulation does not prevent the implementation of 5G technologies, such as network slicing and mobile edge computing. According to Mr Gungl, “*so far, there are no concrete examples of use cases or products that would be negatively impacted by the net neutrality rules*”.

BEREC also noted that the regulation focuses on internet service providers (ISPs) that provide internet access services (IAS). It should not be expanded to encompass the whole internet value chain, even though certain technologies (e.g. app stores for mobile phones) could function as bottleneck, potentially affecting and deterring the openness of the internet.

# Challenges/2

Instead, BEREC plans to update its net neutrality guidelines, which help NRAs to interpret the Regulation. The new guidelines will include a step-by-step method to assess zero-rating cases.

commercial practices, with the provision of a step-by-step methodology for assessing zero-rating cases;

traffic management, with the differentiation of quality of service for IAS, data compression, blocking of content, legitimate security issues and the duration of traffic management measures;

specialised services, its definition, the relationship between specialised services and IAS and the impact of specialised services on the general quality of IAS; and

transparency, the scope of the transparency requirements, mobile IAS speed, hybrid IAS and the process of certification.

# Specialised services

- The regulatory treatment of specialised services, i.e. services other than internet access services optimised for specific content, has not been a real issue as not many of such services have been launched.
- Operators can launch specialised services as long as these are not the detriment of the quality of any internet access services.
- The Commission report ([30 Apr 2019, COM \(2019\) 203 final](#)) summarised the concerns voiced by ISPs regarding the impracticalities of the [BEREC guidelines](#), e.g. measuring performance by making tests of the internet access service while all specialised services on and off respectively (BEREC guideline 121).
- The Commission concluded that it could be necessary in the future to specify the technical and economic grounds on which services can be optimised.
- BEREC will address the issue in the forthcoming update of its net neutrality guidelines.

# 5G network slicing

- 5G network slicing would enable operators to virtually divide network into different parts with different technical characteristics, corresponding with the needs of different types of services.
- The TSM allows operators to implement “*reasonable*” traffic management measures. However, “*such measures shall not monitor the specific content and shall not be maintained for longer than necessary*”.
- For the moment, the Commission is “*not aware of any concrete example where this provision would hinder implementation of slicing technology*”. In the future, it could be necessary to determine what would be “*specific content*” and what not, the Commission stated.

# Conclusions from the EC Study

1 Investigate the impact of a possibly diverging interpretation of the term Network Termination Point on the effectiveness of the Regulation.

2. Clarify the interpretation of traffic management measures and specialised services in light of the objectives of the Regulation.

3. Clarify the relevance of individual orders by Civil Courts or public authorities referred to in Article 3(3)(a) for other market parties not addressed by the order.

4. Consider distinguishing between consumers and business users when evaluating the effectiveness, efficiency and proportionality of the Regulation.

5. Consider how greater transparency and accessibility of national measures and court rulings could be achieved.

# Expect the unexpected (man bites dog...)

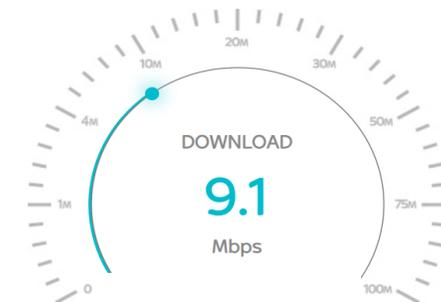
- Expected: ISP discriminate content providers
- Unexpected: content provider may discriminate ISP !

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