
Response to 5G Manifesto
and
Dutch zero-rating provisions

as regards to net neutrality and the BEREC implementation
guidelines for regulation of net neutrality (EU 2015/2120)

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Introduction

We want to thank BEREC for the opportunity to comment on their draft guidelines for the implementation of the Telecom Single Market regulation.

First we want to highlight that we have contributed to this process at the BEREC Stakeholder Dialog event on 15. December 2015 in Brussels with co-drafting a written contribution.¹ As well as with two submissions from European Digital Rights for the policy analysis and recommendations to the BEREC draft guidelines. This comment should be read as an extension of these contributions to the process.

The purpose of this comment is to specifically answer to the arguments of the “5G Manifesto”² which was released on July 7 by the telecom industry³ and to point towards information from the net neutrality debate in the Dutch parliament.

Network Slicing

The document released by 17 telecom companies on 6. July 2016 as “5G Manifesto” claims that BEREC’s Guidelines are ‘excessively prescriptive’, as they ignore the fundamental agility and elastic nature of 5G Network Slicing to adapt in real time to changes in end-user / application and traffic demand and would hamper the exploitation of 5G.

“In this context we must highlight the danger of restrictive Net Neutrality rules, in the context of 5G technologies, business applications and beyond. 5G introduces the concept of “Network Slicing” to accommodate a wide-variety of industry verticals’ business models on a common platform, at scale and with services guarantees.”

We dispute this claim, and argue that 5G can be deployed effectively under the first draft of BEREC’s guidelines, as well as under the guidelines described in our Recommendation submitted with European Digital Rights together with 7 other organisations. This can be proven with the announcement from Verizon to roll out 5G in the USA under the recently court-affirmed net neutrality rules of the FCC Open Internet order.⁴ FCC open Internet access rules give precedence to application agnostic traffic management measures over class-based traffic management measures and the FCC rules don’t have a specific exception for specialised services which would go beyond the specialised service provisions in the BEREC draft guidelines.

On a technical note it is important to highlight that 5G is in no way dependent on technologies like “network slicing”, which as specified by Ericsson’s white paper⁵, as an addition to 5G specification:

“The concept of network slices is not a new one; a VPN, for example, is a basic version of a network slice.”

¹ https://edri.org/files/BEREC_Hearing2015_EDRiposition.pdf

² http://www.euractiv.com/wp-content/uploads/sites/2/2016/07/5G_Manifesto.pdf

³ http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=16579

⁴ <http://finance.yahoo.com/news/verizon-commercially-deploy-5g-wireless-191907995.html>

⁵ <https://www.ericsson.com/res/docs/whitepapers/what-is-a-5g-system.pdf>

Furthermore, it should be noted that “network slicing” can be implemented in a user-controlled, application-agnostic manner. Under this approach, end-users (including CAPs) would be free to determine for themselves which ‘network slice’ to utilize, based on the QoS-characteristics they desire. This method can *‘adapt in real time to changes in end-user / application and traffic demand’* - as the 5G Manifesto proposes - by letting end-users and applications determine their QoS requirements *for themselves*. Therefore, so long as these network slices are defined and made accessible in an ‘application-agnostic’ manner, based on objective QoS requirements, they could qualify as ‘reasonable measures’ for the purposes of Article 3(3) second subparagraph. Similarly, specialised services can, under the Regulation and the current BEREC draft guidelines, utilise “network slicing” if they do not deteriorate the availability and general quality of internet access services and if the optimisation provided by “network slicing” is objectively necessary. We provide these comments as general remarks since the 5G Manifesto fails to point out which parts of the BEREC Guidelines are “excessively prescriptive”.

We would also take this opportunity to make a factual correction to the Manifesto.

The 5G manifesto claims that ‘A fundamental enhancement brought by 5G is the possibility to deliver virtual “network slices” offering different capabilities according to specialised needs.’

The claim that network slicing is an enhancement ‘brought by 5G’ is inaccurate, since network slicing can also be achieved in other networks such as current specialised networks (via Network Functions Virtualisation (NFV) and Software Defined Networks (SDN))⁶. It should therefore be understood that legal restrictions on the use of network slicing do not constitute legal restrictions on the rollout of 5G networks *as such*.

According to the Telecom Single Market Regulation it is important to note that the legislator has not foreseen an exception for 5G and although the Commission was already talking about 5G at the time it introduced this legislation, it chose not to create a technologically specific mandate for 5G in any provision of the Regulation. To the contrary, the legislation is completely neutral towards network technologies and only differentiates between fixed and mobile networks. Therefore, the BEREC implementation guidelines should not introduce technologically specific provisions, particularly when they run contrary to the Regulation (Recital 2).

Infrastructure investment

The Manifesto claims that BEREC’s first draft of the Guidelines will lead to delayed investment in infrastructure rollout, since it is too restrictive.

We note that strong net neutrality rules - such as those outlined in our Recommendations - will actually **increase incentives to invest in network infrastructure**. Firstly, invasive, application-specific forms of traffic management, can allow ISPs to delay necessary upgrades to their infrastructure. Secondly, application-specific zero-rating and price differentiation can distort IAS markets by tying such services to specific CAPs, and reducing pressure to compete on the IAS’ ‘core business’ of bandwidth & price. Thirdly, if technical or economic discrimination is allowed to grant certain CAPs priority in terms of service quality (via specialised services) or exclusion from data cap allowances, the incentive for ISPs to expand network capacity actually decreases, because scarcity of network resources is a precondition for the monetization of this type of vertical integration.

⁶ <https://www.gsmainelligence.com/research/?file=141208-5g.pdf&download>

In this context it is important to highlight past experience with the argument of the telecom industry that net neutrality safeguards would hinder their incentive to invest in their network infrastructure. We know from the debate in the USA around the FCC's proposed net neutrality reform in which the industry claimed this would impact investment in network infrastructure and in 5G rollout in particular. However, almost one year after these rules were implemented, there has been an increase in network investment by the majority of ISPs in the USA: "network investment (and not spending on set-top boxes) at many of these ISPs has been higher following the FCC's February 2015 reclassification"⁷. More so, Verizon and other US telecoms operators recently announced major investments in 5G rollout.⁸

In short, strong net neutrality rules such as those proposed in our Recommendation to BERC will not retard investment in 5G infrastructure. The Manifesto's claims to the contrary have no basis in theory or in empirical fact.

Monetisation of the internet value chain

The 5G Manifesto argues internet business models that are based on vertical integration and CAPs subsidizing the returns of ISPs.

"It is paramount to ensure 5G monetisation to drive investments. Monetisation can take place across the entire value chain with end-users, service providers and industry verticals in order to ensure fair returns, speed up adoption by end-users and ensure consumers are not alone in picking up the bill for the innovation that will help the business cases of the service providers. Operators should also be free to mix and manage different technology generations, mobile or otherwise, that are enabling 5G mobile technology to serve their customers optimally."

At the outset, we acknowledge that the Regulation is relatively flexible as regards the monetisation of specialised services - as distinct and separate services from Internet Access Services - along the value chain of end-users, service providers and industry verticals.

However, to allow providers of Internet Access Service to monetise the entire value chain of the Internet would be *inimical to the concept of net neutrality*, which involves a clear separation between content and conduit to avoid harmful discrimination. It is crucial that providers of IAS are not permitted to impose charges on CAPs for privileged treatment of their traffic (e.g. for traffic prioritization, or zero-rating and other data pricing differentiation). The alternative would be turning the internet into a two-sided market, where ISPs can extract value from both consumers and online service providers - which is precisely what net neutrality and the telecom single market regulation according to Recital 1, 3 and 6 are intended to avoid through clear rules on non-discrimination. Such pricing practices from ISPs would throw up barriers to entry for new online services, thereby harming competition, innovation and diversity online. It would be in clear contradiction to the letter and spirit of the Regulation and Continued development of 'the engine for innovation'.

Furthermore, the Manifesto is baseless in its claim that vertical monetisation of the internet value chain will 'ensure consumers are not alone in picking up the bill for the innovation that will help the business cases of the service providers.' Any additional charges imposed at earlier stages in the value chain by ISPs on content providers, service providers and hardware providers can still be reflected in increased

⁷ <https://www.freepress.net/resource/107129/truth-about-isp-industry-investment-after-fcc-net-neutrality-vote>

⁸ <http://finance.yahoo.com/news/verizon-commercially-deploy-5g-wireless-191907995.html>

costs for consumers. The Manifesto does not provide any evidence to the contrary, and its signers certainly make no promises about not raising end-user IAS rates.

In light of the above, BEREC should reject attempts by ISPs to turn internet access into a double-sided market where ISPs can charge CAPs for access to their subscribers. As the Regulation intended in Article 3(5), such vertically integrated monetisation must only be permitted for specialised services because traffic management according to Article 3(3) subparagraph 2 cannot be based on commercial considerations.

This means that any form of paid privileges, including prioritisation of traffic and data pricing differentiation such as zero-rating, should be prohibited on IAS and furthermore that the provision of SpS should not be to the detriment of IAS bandwidth or quality, as outlined in our Policy Analysis. Perhaps closer to the Industry's true motivation for supporting weaker net neutrality rules; it allows them to raise profits by taxing participants in the Internet ecosystem. It's no secret that big telecoms worldwide have suffered "Google envy" for some years now, in which they shun their designation as mere network providers (aka critical infrastructure) and want desperately to play in the often very lucrative digital content space.

The regulation is clear in Recital 2 that it has to be applied according to the 'principle of technological neutrality'. Therefore there is no legal ground to argue for an application of the regulation which is specific to 5G..

On the investment argument we want to add that notwithstanding the differences in the network investment situation in the USA and EU, it is important to note that Verizon starts the 5G rollout one year earlier already in 2017.

Legal certainty

The Manifesto also claims that strong net neutrality rules will create uncertainty and therefore make the industry risk-averse.

"The EU and Member States must reconcile the need for Open Internet with pragmatic rules that foster innovation. The telecom Industry warns that the current Net Neutrality guidelines, as put forward by BEREC, create significant uncertainties around 5G return on investment. Investments are therefore likely to be delayed unless regulators take a positive stance on innovation and stick to it."

As traditional telecoms, the industry is already risk-averse. That is by design precisely because communications networks are critical infrastructure. We can all agree that the Guidelines must be as clear as possible - as repeatedly emphasised in our Policy Analysis. For instance, introducing bright-line rules on prohibited types of commercial practices such as application-based price discrimination - as opposed to relegating such practices to case-by-case assessments - creates far more certainty for all internet stakeholders. Clear distinction between specialised services and internet-based services, which eliminates any potential confusion between these groups, is also a crucial clarification.

We also note that the Manifesto's call for certainty also contradicts its critique that the Guidelines are 'excessively prescriptive'. Clear specifications of what is permitted and prohibited are precisely what is necessary to allow for legal certainty, a healthy and sustainable climate for investments, low regulatory costs and through the harmonized implementation the fulfilment of the digital single market. Open norms and case-by-case approaches achieve the opposite effect.

We see that regulation that is nebulous about net neutrality creates uncertainty for the growth and vitality of the internet today. Given that development of technologies that will support 5G are still ongoing, clear net neutrality rules governing the openness of Internet access services are the only thing that can protect all stakeholders on the internet growing into this uncertain future. It is clear that for 5G to serve the functions of the “engine of innovation” any developments must support fundamental rights of all internet stakeholders which are enshrined in the telecom single market regulation and therefore should be enshrined in comprehensive BEREC guidelines.

Conclusion

This comment has considered and refuted central contention that weaker net neutrality rules are necessary to facilitate the rollout of 5G. Taking the strong net neutrality rules put forward in our Recommendations as a starting point, the underlying arguments are revealed to be meritless under closer scrutiny:

Network slicing *can* be rolled out effectively in net neutrality-compatible ways, either as a user-controlled, reasonable traffic management measure or in the form of a specialised service. The positive 5G developments in the USA after 2015 are proof of that. Investment in network rollout is not discernibly affected by net neutrality rules, which are instead likely to have beneficial effects for competition in IAS infrastructure, because they offer a predictable market situation, instead of dangerous experiments with untested vertically-integrated business models, which have to be rejected because of their harmful effects contrary to the goal of the Regulation. Regarding monetisation, the Manifesto does not distinguish adequately between Specialised Services, where the entire value chain for specialised services can be permitted, while such monetisation of Internet Access Service is rightfully permitted by the legislator.

With all these claims deflated, the 5 Manifesto leaves but one rationale for the weakening of net neutrality rules: protecting the return on investment for telecoms operators for a network rollout which will occur any way.⁹

Understanding 5G. (GSMA intelligence):

<https://www.gsmainelligence.com/research/?file=141208-5g.pdf&download>

⁹ Article 7.4a paragraph 3 of the Telecommunications Act, as approved by the Lower House of Parliament of the Netherlands on 17 May 2016.

Additional remark on the Dutch government's position on net neutrality

We would also add that we endorse the following position of the Minister of Economic Affairs of the Netherlands regarding the regulation of zero-rating, which he outlined in a [letter](#) to the Dutch Senate on 1 July 2016. For your convenience, we offer our unofficial translation of the relevant passage:

'It is correct that BEREC's draft Guidelines leave some room for price discrimination, especially for zero-rating. In the opinion of the Dutch government, BEREC is hereby unduly ignoring the explicit prohibition of discrimination in the provision of internet access services laid down in Article 3(3) first paragraph. Of course, BEREC is not permitted to divert from the Regulation in their (non-binding) Guidelines. In order to remove all uncertainty regarding price discrimination in the application of the Regulation, and due to the great interest in a prohibition of price discrimination in practice, the legislative proposal explicitly determines that price discrimination is not permitted. BEREC's interpretation could lead to a situation where differences emerge amongst the Member States in the application of the net neutrality rules. Only a quote from the European Court of Justice can provide (definitive) clarity concerning this issue.'

At a later point in the text, the Minister adds that the bright-line prohibition of application-based zero-rating is *'merely making explicit a rule which already follows from the Regulation'*. In addition to this, we note that application-based differentiation would also be prohibited under Article 3(1) and 3(2) of the Regulation as a limitation of end-users rights', as outlined in our Policy Analysis. Furthermore, we emphasize the Minister's point that a case-by-case approach to price differentiation (in his words: 'leaving some room price discrimination') is likely to result in legal divergence between Member States, thus contravening the Regulation's purpose of creating 'common rules at the Union level to ensure the openness of the internet and to avoid fragmentation of the internal market resulting from measures adopted by individual Member States' (Recital 3, last sentence), and the Guidelines' aim to 'contribute to the consistent application of the Regulation, thereby contributing to regulatory certainty for stakeholders' (Paragraph 1). The clear position of the Dutch government on this issue already guarantees that a more permissive approach to price discrimination from other Member States will directly result in legal divergences in the internal market, thereby contributing the need for a bright-line rule such as the above.

Below is our unofficial translation of the Dutch prohibition of application-based price differentiation, which we propose as a best practice on this issue for BEREC's guidelines:

'Providers of internet access services shall not make the height of rates dependent on the services and applications which are offered or used through this service.'