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Body of European Regulators for Electronic Communications (BEREC)

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The Information Technology and Innovation Foundation (ITIF) appreciates this opportunity to provide input on the “Consultation paper on the evaluation of the application of Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines.”¹² BEREC is wise to seek consultation on the implementation of its guidelines; broadband networks continue to dynamically adjust to new breakthroughs in technology, as well as changes in consumer demand and market conditions. If regulation is to be successful in setting the right conditions for a flourishing Internet ecosystem, it should be an iterative process, adapting to changed circumstances.

While we appreciate BEREC opening this consultation, we also recognize the body is constrained in its power to guide open Internet policy. Its guidelines operate within the bounds of Regulation 2015/2120, and, what is more, it is ultimately up to the National Regulatory Authorities (NRAs) to implement and enforce specific rules. This is unfortunate. As we have argued in other contexts, the European Union would be better off with a less fragmented system.³ While some empirical minded economists may relish a wide diversity of net neutrality rules, we think it would be best if the right balance were struck at an EU-wide level, allowing for uniform rules with minimal compliance costs and complexity and maximum scale in offered services. BEREC should be encouraged to ensure NRAs are taking the utmost account of the Guidelines and not going their own way for the sake of provincial political purposes.

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1. Founded in 2006, ITIF is an independent 501(c)(3) nonprofit, nonpartisan research and educational institute—a think tank—whose mission is to formulate, evaluate, and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. Ranked by the University of Pennsylvania as the world’s leading science and technology think tank, ITIF’s goal is to provide policymakers around the world with high-quality information, analysis, and recommendations they can trust. To that end, ITIF adheres to a high standard of research integrity with an internal code of ethics grounded in the core values of analytical rigor, policy pragmatism, and independence from external direction or bias.
 2. BEREC, “Consultation paper on the evaluation of the application of Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines” (March, 2018) (Guidelines).
 3. Doug Brake, “Spectrum Policy and the EU Digital Single Market: Lessons from the United States,” *ITIF* (2015).

As a general matter, the second half of Recital 1, which “aims to protect end-users and... guarantee the continued functioning of the internet ecosystem as an engine of innovation,” is undoubtedly the right aim.⁴ However, most of the conversation around innovation and network neutrality is frustratingly narrow. Only one, narrow type of innovation has gained cachet in the broader public conversation: application layer innovation. Of course the Internet as a generally open platform, allowing “permissionless” innovation throughout its modular layers, has created tremendous value and is worth protecting. But we must not be overzealous in promoting this type of innovation at the cost of other avenues for IP-based services to evolve.

Policymakers like BEREC should appreciate and promote innovation both at the application layer and within networks. Johannes Bauer and Günter Knieps of Michigan State and University of Freiburg respectively discuss this point in their recent paper, “Complementary Innovation and Network Neutrality.”⁵ Discussing the popular “permission-free” innovation at the application layer, they explain:

Yet, not all types of Internet-based innovation fit into this framework. The growing relevance of video, cloud computing, and Internet of Things (IoT) applications requires that innovations in traffic service networks meet quality of service (QoS) needs, which cannot be met in the historical, best-effort network. Because such innovations will become more important in the future, the provision of differentiated QoS in traffic networks becomes a precondition for expanding the innovation opportunities for applications and services in higher layers.⁶

There are valuable opportunities for differentiated treatment of Internet traffic to unlock new services that cannot be provided under the typical “best-efforts” broadband. This is not a zero sum prospect—there are tradeoffs between different technical characteristics of the network.⁷

Applications vary in how much delay (latency) or variance in delay (jitter) they can tolerate, for example. Generally real-time services with humans interacting at a distance—such as Voice over Internet Protocol (VoIP) or teleconferencing—require a reliable, low-latency connection.

To date, the Internet has generated tremendous value through with this “best-efforts” system, but many of the exciting innovations around the corner, including those that rely on virtual reality and real-time cloud

4. Guidelines at 4.

5. Johannes Bauer & Günter Knieps, “Complementary Innovation and Network Neutrality,” *Telecommunications Policy* (Dec 2017), <https://www.sciencedirect.com/science/article/pii/S0308596117304615>.

6. Ibid.

7. For discussion of the opportunities of non-zero sum differentiated treatment of Internet traffic, see Broadband Internet Technical Advisory Group, “Differentiated Treatment of Internet Traffic,” (October 2015) http://www.bitag.org/documents/BITAG_-_Differentiated_Treatment_of_Internet_Traffic.pdf.

computing, will increasingly require reliable low-latency connections. And while some applications affirmatively need prioritization or some kind of differentiation, other applications can easily tolerate delay or jitter. Indeed, these enhanced quality-of-service applications are anticipated to be a key component of 5G networks. Non-zero sum trade-offs around technical requirements of different types of applications are the only economical way to achieve radical improvements in perceived end-user performance, and have therefore been designed into specifications related to 5G.

In fact, the UK telecom regulator, Ofcom, has pointed to concerns that the European net neutrality regime is too strong, and could unduly constrain the evolution of 5G services.⁸ In a section of a recent report titled “Net neutrality regulation may need to evolve to facilitate innovations in networks,” Ofcom discusses capabilities unlocked in next generation networks that will enable network operators to provide dedicated virtual networks and better quality of experience to different customers over a common network elements. The UK regulator states “it will be important to ensure that regulation does not prove an impediment to such innovation, particularly net neutrality rules”, and proposes working with the EU body recommending net neutrality regulations to tweak the rules and ensure innovation continues to flourish.⁹

BEREC should take Ofcom up on this offer, and loosen the restrictions recommended in its guidelines. The key is rules protecting best efforts delivery of traffic, allowing for competition to drive improvements in speed and other performance metrics, while allowing networks the space to innovate with new, dynamic services that go above and beyond basic broadband. As tech columnist for the *Boston Globe*, Hiawatha Bray, put it in a recent piece arguing for legislation on net neutrality in the United States, “[a]s long as companies are forbidden from actively slowing down Internet services that don’t pay extra for superior service, I don’t see a problem.”¹⁰

Along these lines, BEREC should allow for a permissive regime that allows Internet Access Services to sell high-quality, QoS guaranteed services, so long as they do not degrade the performance of regular best-efforts Internet traffic. Very simple rules around paid prioritization or other types of traffic differentiation, such as

8 . See Ofcom, “Enabling 5G in the UK” (March 9, 2018), <https://www.ofcom.org.uk/spectrum/information/innovation-licensing/enabling-5g-uk>.

9 . Ibid.

10 . Hiawatha Bray, “On Net neutrality, it’s time for Congress to act,” *Boston Globe* (Dec. 2017), <https://www.bostonglobe.com/business/2017/12/13/net-neutrality-time-for-congress-act/RDy7bNUgw5Fo9c8pnQB14I/story.html>.

zero rating, can prevent the theorized harms that net neutrality activists point to. By requiring that prioritization be offered on the similar terms to all comers, and not be provided on exclusive terms or only to affiliates, NRA would not need detailed restrictions on “specialized services” but instead allow space for this type of innovation.

Strict network neutrality like that recommended in the Guidelines made a lot more sense when first articulated almost 16 years ago.¹¹ Back in the early days of the Internet, bandwidth was far more constrained. Much of the economic concern behind net neutrality has always revolved around video. Today, the bandwidth available to the vast majority of consumers is more than sufficient for high-definition entertainment. The next generation of networks are aiming to enable new types of services that cannot be reliably provided over existing connections.

BEREC should amend its guidelines to allow for the continued evolution of IP-based networks, and not lock down a particular, narrow type of service. This need not come at the cost of end-user choice or continued innovation at the application layer. Thank you for this opportunity to comment on BEREC’s guidelines; we hope BEREC takes this opportunity to refine its guidelines and recommend NRAs allow for innovation in next generation network services.

Sincerely,

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11 . See Tim Wu, “A Proposal for Network Neutrality” (June, 2002), <http://www.timwu.org/OriginalNNProposal.pdf>.