The BBC's response to Ofcom's Call for Evidence: Net Neutrality Review

2 November 2021

Introduction

1. We welcome the opportunity to provide evidence for the purposes of Ofcom's net neutrality review.

2. The net neutrality rules have ensured – and should continue to ensure - an open internet in the UK. An open internet means all users can access the services they chose to via their ISP. And they can do so at the same speed and quality as with any similar services, regardless of the device used or the provider of the service consumed. In other words, the rules have ensured that ISPs are not able to give priority to, or slow down access speeds for, particular content providers to serve their own interests. This openness has maintained freedom of choice for internet users and maintained competition between content providers big and small.

3. We note that the UK's open internet rules are rooted in key principles. In our view these principles have resulted in flexible rules that remain fit-for-purpose. Key principles include:

- Preservation of the internet as a tool for 'innovation without permission' – connecting end-users with content and services without gatekeeper actors.
- The rights of end-users to access and distribute (lawful) content, applications and services without discrimination, via their internet access service ("IAS").
- Equal treatment of traffic, irrespective of its sender or receiver, content, application or service, or terminal equipment (subject to specific defined exceptions – lawfulness, network security, preventing congestion).
- The application of transparent, non-discriminatory and proportionate reasonable traffic management measures which are not based on commercial considerations.
- The ability of providers of IAS to offer specialised services with specific levels of quality requirements, as long as this doesn't impede the quality of IAS.

4. We are firmly of the view that these important principles which support the open internet should be preserved. This is to avoid the re-emergence of poor outcomes for end-users prior to implementation of the rules, such as a worsened viewing experience due to throttling of BBC iPlayer.[1] This is in the interests of end-users, for whom the rules ensure unfettered access to innovative services, freedom of choice and a growing UK economy. Indeed, the number of adult daily internet users in Great Britain has grown from 16.2 million in 2006 to 46.6 million in 2020, with 92% of adults in the UK having used the internet in 2020.[2] Use of the internet for a whole host of activities has grown dramatically over the period. In the first two months of 2020, 76% of adults in Great Britain used internet

[1] See http://news.bbc.co.uk/1/hi/technology/8077839.stm
[2] Office for National Statistics, UK.

banking, up from 30% in 2007. Similarly, 87% of adults had shopped online in the last 12 months, up from 53% in 2008.[3] During the first half of 2020 alone, more than 85,000 businesses in the UK launched online stores or joined online marketplaces.[4] The UK's e-commerce revenue in 2019 amounted to £693 billion.[5]

5. We understand that Ofcom is not consulting on changes to the net neutrality rules, which are a matter for parliament. Nevertheless, it is important to reiterate that the current net neutrality rules are working well and facilitating optimal outcomes for end-users. End-users seek to consume services online, ISPs compete to provide IAS that enables them to do so and content providers compete to provide the services that end-users seek. The current approach provides a level playing field that facilitates competition for the end-user at every level of the supply chain.

6. We are cautious of the risks raised by recent calls for a relaxation of the rules. Alternative systems have been proposed which would encourage ISPs to charge online services for fast-tracked delivery to internet users. This could mean that users are no longer able to access all services at the same levels of speed or quality as today. If online service providers (e.g. the BBC, ITV, Netflix, gaming companies etc) are charged a fee by ISPs – many companies will pass the increased cost on to consumers meaning UK customers facing higher prices. The BBC would however have to divert licence fee income away from British content investment, to pay ISPs for access to audiences. These ISP access costs could be particularly burdensome for new entrants into the content market and smaller content providers. In reality, it is likely that global tech giants would have a greater ability to absorb these cost increases (without passing them onto audiences) than domestic content providers, such that the wider domestic content market in the UK would be disproportionately affected. This distorted competition in the UK content market could force some providers to exit, limiting service choice for internet users.

7. While use of the internet is growing and will continue to do so, the consequent investments that all parties involved will need to make to facilitate this does not warrant a change to the net neutrality rules. Instead, we would encourage that traffic spikes are tackled by exploring what can be done within the rules, which already allow for flexible **traffic management**. Further, all parties should be encouraged to work more collaboratively to manage traffic loads, given their aligned interests in delivering content and services effectively to internet users.

[3] Office for National Statistics, UK.
[4] See https://www.uktech.news/news/85000-businesses-launch-online-shops-as-lockdown-creates-digital-economy-boom-20200703
[5] Office for National Statistics, UK.

At a minimum, large content providers and CDNs should be regularly communicating with ISPs about expected, predictable periods of high traffic volumes.

8. In addition:

i. We support the role of **specialised services** sitting alongside the open internet, as long as specialised services do not mean diminished IAS provision for end users. We have not seen that the current rules restrict deployment of specialised services (such as BT's and Virgin's IPTV services), showing that such services do not come into conflict with the neutrality rules. With regards to 5G in particular, the BBC has been exploring possible future uses of 5G in our activities. We therefore have an interest in seeing these developments materialise in the form of specialised services and we consider that the current net neutrality rules could still be applied to these new services. Nevertheless, we agree with Ofcom that there could helpfully be clarifications made to this aspect of the rules.

ii. We recognise that greater clarity around **zero-rating** could be beneficial. The BBC is a participant in zero-rating deals as these are allowed within the rules and can have consumer benefits. But we recognise some deals could impact competition in the market. To the extent that zero-rating deals remain permissible in the UK under the net neutrality rules (in light of recent decisions by European courts), we consider that the current case-by-case approach to the assessment of these deals should continue to apply. It is also our view that continuing to allow zero rating in exceptional circumstances is important. We saw during the Covid pandemic that the rules worked well, allowing the BBC (and others) to work with MNOs/ISPs on zero rating for educational content.

9. We see that Ofcom's review is timely and could helpfully evaluate the guidance and application of the net neutrality principles. We set out more detailed comments below in response to Ofcom's specific questions.

Question 1: Functioning of the net neutrality framework
(a) Which aspects of the current net neutrality framework do you consider work well and should be maintained? Please provide details including any supporting evidence and analysis.
(b) Which aspects, if any, of the current net neutrality framework do you consider work less well and what impact has this had? What, if any, steps to you think could be taken to address this and what impact could this have? Please provide details including the rule or guidance your response relates to and any supporting evidence or analysis.

10. As set out in the introduction, the BBC considers that the current net neutrality rules work well, and we would support maintaining the entire framework. For completeness, we set out below the detail of why some particular elements of the framework are particularly effective.

Traffic management

11. Under the current framework, all parties play a role in the system to ensure it delivers for end-users. The ISPs' role is to build out their networks to ensure a sufficient quality of service is delivered to their customers, which their customers pay for and expect. The role of content providers is to invest in the creation of high quality, attractive content (which audiences or advertisers pay for) and to make the necessary provisions to ensure this content reaches their audiences efficiently.[6] Consumer demand for this online content further fuels demand for high quality connectivity. The current system serves to maintain the direct connection between what audiences pay for and the services they receive. This direct accountability to the end-user serves to align the incentives of content providers and ISPs to place the needs of the end-user first.

Specialised services

12. The current rules have not restricted the development of specialised services (such as BT's and Virgin's IPTV services). This shows that such services do not come into conflict with the neutrality rules. We support the current rules which require Ofcom to assess whether the "necessity requirement" for specific quality levels are met, and if so, for Ofcom to determine whether the provision of such specialised services leaves sufficient capacity for IAS.

[6] Content providers currently incur material distribution costs, for example through peering, transit and/or CDN charges. These are all elements of the value chain which content providers control. These costs incentivise content providers to distribute their content as efficiently as possible and allow content providers to make best value decisions in these areas.

13. With regards to 5G in particular, we consider that the current rules allow for innovation although there may be scope for clarification.[7] Network slicing is not incompatible with current net neutrality rules conceived of as specialised services (crucially, where these services are outside of the open internet).[8] Indeed, the BBC may be interested in utilising network slicing in future, for example for cost-savings in content production and distribution and/or for radio delivery over IP. These are areas we are actively investigating (discussed in response to Q2 below). We therefore have an interest in seeing these developments materialise in the form of specialised services and our view is that the current rules support this.

Zero-rating

14. While the BBC has participated and continues to be a part of a number of zero rating deals in the UK, our view is the practice needs to continue to be treated with caution. While such deals can offer consumer benefits our view is that some deals could, potentially, distort competition. We therefore think the practice deserves a further look as part of Ofcom's review.

Traffic spikes

15. Notwithstanding, we recognise that network capacity and traffic volumes do not always grow in sync – i.e., consumer demand for internet-delivered content and services has at times created challenges for ISPs' networks. For example, games downloads and Amazon Prime's exclusive online live streaming of Premiership Football have resulted in spikes in traffic on fixed line networks. However, we do not consider that limited instances of ISPs' network capacity coming under strain warrants overhauling the net neutrality rulebook.

16. Instead, we would encourage that traffic spikes are tackled by exploring what can be done within the rules, which are already flexible in terms of giving ISPs the ability to manage categories of traffic in peak times. Existing net neutrality rules recognise these challenges and have provision for traffic management if required. For example, particular categories of traffic with objectively different technical quality of service requirements could be throttled in times of congestion under the current rules, provided all services within a particular category of services are throttled equally.

[7] This appears to be consistent with Ofcom's 2020 Open Internet compliance report: "we have not been able to identify a case study or a situation where the current rules would present a realistic challenge to the introduction of new 5G services.". See https://www.ofcom.org.uk/__data/assets/pdf_file/0033/197709/net-neutrality-report-2020.pdf.

[8] It is crucial that the particular services offered over 5G are assessed as objectively necessary to meet the requirements for a specific level of quality, since ISPs would have an incentive to circumvent net neutrality rules by turning IAS traffic into specialised services traffic where possible.

17. Further all parties should be encouraged to work more collaboratively to manage traffic loads, given their aligned interests in delivering content and services effectively to end-users. At a minimum, large content providers and CDNs should be regularly communicating with ISPs about expected, predictable periods of high traffic volumes. There are also many actions which content providers, either alone or in collaboration with ISPs, can take to manage their traffic delivered over ISP networks.[9] The BBC already invests in a number of areas relating to improving the efficiency of media delivery over both the fixed and mobile internet. Examples include investing in our own and third party Content Delivery Networks ("CDNs") which reduces distribution costs for both the BBC and ISPs, as well as developing more efficient forms of content packaging and video encoding (which reduce the capacity or bit rate required for a given picture quality). In addition, in the context of future 5G mobile networks, significant research effort is being put into topics such as optimising broadcast and multicast in international standards bodies (such as 3GPP), through collaborations with industry and in practical trials (discussed in response to Q2 below).

18. In addition, there are areas of ambiguity in the current framework. We believe it is flexible enough to be able to deal with current challenges, but there is merit in clarifying the guidance on the application of the rules in a number of areas (as set out in our response to Q5)

Question 2: Use cases, technologies, and other market developments
(a) What, if any, specific current or future use cases, technologies or other market developments have raised, or may raise, particular concerns or issues under the net neutrality framework?
(b) What, if any, steps do you think could be taken to address these concerns or issues and what impact could this have? Please provide details of the use case, technology or market development and the rule or guidance your response relates to, as well as any supporting evidence and analysis.

19. We do not have any specific concerns about how the current framework functions in respect of future uses cases or market developments.

[9] Given its highly exceptional nature, actions required to be undertaken during the COVID-19 pandemic should not influence the legislation. Nevertheless, Ofcom's 2020 Open Internet compliance report provides numerous examples of how content providers and ISPs co-operated to manage traffic volumes during the Covid-19 pandemic. These included: temporarily reducing HD video quality to SD, optimised routing and peering arrangements higher up the internet value chain, updating games off peak and limiting games download speeds, and providing advanced notice to ISPs of future high traffic scenarios. See https://www.ofcom.org.uk/__data/assets/pdf_file/0033/197709/net-neutrality-report-2020.pdf.

20. We have considered this question in the context of the BBC's potential future uses of 5G – including the use of specialised services (or 'network slicing') over 5G networks. As set out above, we believe the current rules are based on sound principles which provide sufficient flexibility for deployment of 5G specialised services. Nevertheless, clarity that such specialised services would be allowed within the rules would be helpful - subject to the requirement that the quality of IAS is not diminished for end users.

Question 3: Value chain
Are there particular business models or aspects of the internet or other value chains that you think we should consider as part of our review? Please explain why, providing details including any supporting evidence or analysis.

21. In the BBC's view, the current clarity of roles and incentives along the value chain produces optimal outcomes for end-users.

22. End-users seek to consume services online. ISPs build out their networks to ensure service quality for their customers is high, which their customers pay for and expect. Online content providers, like the BBC or Netflix, create high quality, attractive content and make their own substantial distribution investments to ensure this content reaches their audiences over ISPs networks efficiently.[10] End-user demand for this content and other services further fuels demand for high quality connectivity, stimulating further network investments from the ISPs. The current approach provides a level playing field that facilitates competition for the end-user at every level of the value chain. This has resulted in end-users benefitting from low IAS and content prices, combined with high quality connectivity and content choices.

23. As a result, consumer demand for online services has been growing, to the benefit of all parties and the UK as a whole. Under the current rules, the low barriers to entry and expansion have facilitated the growth of online businesses big and small. Demand for these services has fuelled demand for connectivity and growth of the ISPs. On the whole, this model has led to economic growth, job creation, and an environment of unprecedented user choice.[11]

[10] Content providers do incur substantial costs to distribute their content over the internet, investing directly in infrastructure and software innovations to support the efficient delivery of their services. The costs involved provide strong incentives to minimise the amount of data required to deliver their services over ISPs' networks.

[11] As explained by Tim Wu, today's internet has a range of diverse and competitive markets operating over the internet's basic infrastructure. This market structure is competitive because barriers to entry are low, and start-up costs are minimal. Competition is mostly meritocratic, leading to a constant process of innovation

24. We caution against any relaxation of the rules that could upset the effective functioning of this model in which end-user demand for content successfully drives UK growth. Any evidence of harm caused by the current rules would have to be weighed against potential harm caused by overhauling the rules. The latter could be far greater considering the gatekeeper positions which would be created in a two-sided market.

25. Systems which allow for paid prioritisation would throw respective interests out of alignment, to the detriment of end-users. Under a two-sided market in which ISPs could charge content providers for prioritisation, we identify at least the following considerable risks:

- Since content providers cannot threaten to switch away from ISPs owing to their gatekeeping positions over their end-users, content providers have no ability to discipline ISP conduct or pricing in the same way as end-users can.
- Since the end-user cannot determine whether poor quality service is the fault of the ISP or content provider, combined with the fact that audiences perceive switching between ISPs to be difficult, the end-user is more likely to switch content provider than ISP. This is supported by recent Ofcom research which found that 40% of people are deterred from switching broadband provider due to perceived complexity.[12]
- As a result, ISPs could be incentivised to (i) charge monopoly connectivity prices and (ii) throttle content providers' traffic to induce payment. Moreover, it is not obvious that these revenues would be invested in the expansion of ISPs' networks, given ISPs' incentive to maintain an environment of scarce capacity. This could result in lower service quality for the end-user overall.
- Even where ISPs do invest content provider-side revenues into improving the quality of their networks (of which there is no guarantee), higher distribution costs for content providers will continue to leave end-users worse-off because:
    - Some content providers would need to raise their content prices for end-users, or reduce their investment in content. It is likely that global companies (e.g. Google, Netflix, Amazon) would have greater ability to absorb the cost increases, or avoid payment to ISPs entirely by providing value to ISPs in some other way, such that domestic content providers and the wider domestic content market in the UK would be disproportionately affected. PSBs in particular, who provide their content for free to

online. However, there is one part of the internet that isn't competitive – broadband access. See https://www.govinfo.gov/content/pkg/CHRG-109hhrg27225/html/CHRG-109hhrg27225.htm

[12] The UK ISP market is less competitive than the content market. There are only a small number of UK ISPs and switching between them is difficult due contractual lock-in and additional costs. Ofcom recently reported that 40% of people are deterred from switching due to complexity – see https://www.bbc.co.uk/news/technology-55918697

audiences, would be required to pay ISPs at the expense of local content investment.
    - Higher distribution costs could be particularly burdensome for new entrants into the content market and smaller content providers. This could result in their relatively poor quality service delivery or forced exit from the market, distorting competition in the content market and limiting choice for end-users.
    - Paying ISP distribution charges would disincentivise expansion and innovation. For example, higher IP distribution costs for content providers would discourage the provision of innovative services like UHD and the migration towards an all-IP future, slowing long-run competitiveness and digital growth for Britain.

26. We are therefore firmly of the view that end-users would be worse off under a two-sided market for internet access services. They would be highly likely to face higher content prices, less innovative services and reduced content choices due to reduced investment from content providers (particularly within the UK where the licence fee would have to be diverted from content spend to paying ISPs). Instead, ISPs should continue to pay for the networks they build and consumers should be free to purchase the broadband and services they wish to use.

Question 4: International cases studies
Are there any international case studies or approaches to net neutrality that you think we could usefully consider? Please include details of any analysis or assessments.

27. It can be interesting to look to outcomes in the US after their net neutrality rules were repealed by the FCC in 2017. In this regard we note the following:

- The US experience of repealing the net neutrality rules is contested. Research shows that despite claims that deregulation of the broadband industry would reverse the trend of rising prices, the average household Internet price in the US increased between 2016 and 2019 by 19% across all households (inflation adjusted), with monthly costs rising from $39.35 in 2016 to $47.01 in 2019. Across internet subscribing households in particular, inflation-adjusted prices rose by 7%. Moreover while prices rose, ISPs own costs and investments dropped.[13]
- The FCC statement that their repeal of the laws had increased access to high speed internet was highly criticised. It was found that the FCC's figures were incorrect, showed millions of people still lacking access to high speed internet,

[13] See https://arstechnica.com/information-technology/2021/05/ajit-pai-promised-cheaper-internet-real-prices-rose-19-percent-instead/

and had apparently taken credit for broadband redeployment and speed increases under way before the net neutrality rules were repealed.[14]

- While few instances of adverse outcomes arose post-repeal, it is unsurprising that ISPs did not immediately make significant changes to their business models. Fragmentation of the rules between different US states resulted in a lack of clarity over what was permissible under the new regime. Moreover, changes are more likely to be incremental over a number of years given that outcomes in the US would naturally be watched closely by other authorities around the world.
- A number of instances of problematic conduct *were* identified in the years following the repeal.[15] [16] [17] [18]

28. Separately, with respect to zero-rating, the Court of Justice of the EU has considered zero-rating practices twice in the last two years, concluding that zero-rating practices can be contrary to the general obligation of equal treatment of traffic under the net neutrality rules. In 2020 and 2021, the court found that zero rating was liable to limit the exercise of end users' rights.[19] In 2021 in particular the court plainly stated that "*a 'zero tariff' option… draws a distinction within internet traffic, on the basis of commercial considerations, by not counting towards the basic package traffic to partner applications. Such a commercial practice is contrary to the general obligation of equal treatment of traffic, without discrimination or interference, as required by the regulation on open internet access*".[20] This is evidence of the fact that such deals may be against the spirit of the rules, and are potentially detrimental for end-users. As a result, BEREC is currently consulting on whether zero rating practices are compatible with the net neutrality principles.[21] We would support a similar focus on zero rating in the UK.

[14] See https://www.theverge.com/2019/5/30/18644726/fcc-broadband-report-high-speed-rural-statistics-reactions and https://arstechnica.com/information-technology/2018/02/heres-ajit-pais-proof-that-killing-net-neutrality-created-more-broadband/

[15] See https://arstechnica.com/tech-policy/2018/08/verizon-throttled-fire-departments-unlimited-data-during-calif-wildfire/

[16] Note that this was made possible by the fact that California was not able to begin enforcing its own net neutrality rules until March 2021.

[17] See https://www.benton.org/headlines/sprint-throttling-microsofts-skype-service-study-says

[18] See https://www.theverge.com/2019/7/9/20687903/net-neutrality-was-repealed-a-year-ago-whats-happened-since

[19] 15 September 2020 - Cases C-807/18 and C-39/19. 2 September 2021 – Cases C-854/19, C-5/20 and C-34/20.

[20] See https://curia.europa.eu/jcms/upload/docs/application/pdf/2021-09/cp210145en.pdf

[21] See https://berec.europa.eu/eng/news_consultations/ongoing_public_consultations/8955-call-for-stakeholder-input-to-feed-into-the-incorporation-of-the-ecj-judgments-on-the-open-internet-regulation-in-the-berec-guidelines

Question 5: Guidance and approach to compliance and enforcement
Are there specific challenges with the existing guidance that we should be aware of (e.g. ambiguity, gaps)? Assuming the rules stay broadly the same, which areas could Ofcom usefully provide additional clarity or guidance on? Please provide details.

Specialised services

29. We understand that under the current rules specialised services may sit alongside the open internet, as long as specialised services do not diminish the quality of IAS provision for end users. We agree with Ofcom that there could helpfully be clarifications made to this aspect of the rules. In particular:

- which types of services meet this criteria (for example, IPTV duplicates services that are also available over IAS);
- how Ofcom will assess whether the "necessity requirement" for specific quality levels are met;
- how Ofcom will determine whether the provision of specialised services leaves sufficient capacity for IAS; and
- whether Ofcom's assessment of specialised services should necessarily take place *ex-post*, and how frequently services should be reassessed.

30. Such clarification is important to mitigate the risk that ISPs charge for "specialised services" that in fact are used to deliver regular internet services over a fast lane, thereby circumventing the net neutrality rules.

31. Moreover, the guidance should continue to highlight where such deals are more likely to be harmful, including:

- where deals are not available to all content providers on a non-discriminatory basis and where there are barriers to joining;
- where vertically integrated ISPs with strong market positions zero-rate their own content;
- where deals involve ISPs and content providers with strong market positions; and
- where deals correspond with higher data prices or lower data caps.

Zero-rating

32. As mentioned in response to Q1, we have some concerns about the use of zero-rating. We consider that the current case-by-case approach to the assessment of these deals should continue to apply. This would allow for the short- and long-run costs and benefits to be weighed in each case. Zero-rating is an area where more clarity is needed. In particular:

- The extent to which Ofcom agrees with the recent EUCJ rulings that zero-rating practices can be contrary to the general obligation of equal treatment of traffic under the net neutrality rules.
- Further guidance around harmful use cases to mitigate the risk of deals leading to adverse outcomes.
- Further guidance around the extent and nature of zero rating deals that would be permissible in exceptional circumstances, such as during public health and safety crises.

Question 6: Annual report
Do you find Ofcom's annual monitoring report useful or are there any changes you think we could usefully make either to the content or how we communicate this?

33. We find Ofcom's annual monitoring reports useful. Transparency and sufficient detail of the measurements and considerations undertaken for its monitoring reports can usefully provide certainty for future cases. Moreover, the monitoring reports serve to ensure ISPs remain compliant with the net neutrality rules and secure good outcomes for consumers.

Question 7: Other
Is there any other evidence or analysis that you are aware of and/or could provide to aid our review?

34. It is noteworthy that many of the arguments circulating today in opposition to the open internet model are the same as those addressed in the Open Internet Report published by Plum in 2011.[22] We recommend that Ofcom revisit the "myths" raised and debunked in the report, given that such myths continue to cloud the policy debate in the UK today. The report can be accessed here.

[22] See https://plumconsulting.co.uk/open-internet-platform-growth/