



Asociación Española de VOD

Public consultation on the draft BEREC Report on the IP Interconnection ecosystem

Comments from AEVOD, the Spanish Video-on-Demand Association

July 26, 2024

AEVOD, the Spanish Video-on-Demand Association, brings together the main companies in the video-on-demand sector that offer services in Spain, with the aim of joining forces for the correct development of this market in the Spanish territory. Currently, AEVOD has as members the following companies: Acontra+, AMC Networks, DAZN, Disney+, Filmin, Film&Co+, Flixolé, Márgenes, Max, Netflix, Prime Video, Rakuten and SkyShowtime.

AEVOD acknowledges the efforts of BEREC to better understand the IP Interconnection ecosystem, and welcomes the opportunity to provide its input to the draft report through the present consultation process.

AEVOD and its members strongly agree with the importance of having robust network infrastructures and high-speed connections that allow citizens to access a wide variety of contents. Indeed, AEVOD has repeatedly stated that the relationship between content and networks consists of a virtuous circle. Consumers pay for high-speed internet access and use their connection to reach content and services they value. As stated not only by the BEREC draft report itself but also by numerous pieces of evidence¹, content generates demand for broadband adoption: consumers pay for faster broadband packages by seeking high quality access to great movies, series, programmes, games and other types of content.

This virtuous circle has encouraged a cooperative model in which content providers and network operators work hand in hand to deliver content more efficiently, reducing costs and adding value for all parties involved. As the draft report shows, content providers not only invest in the best content to nurture the online ecosystem, but they also do so by proactively investing heavily in infrastructure and technology to ensure the efficient distribution of their content.

Following this, we appreciate that the BEREC draft report concludes the following:

- The fact that since its creation, the internet has managed to cope with both traffic growth and higher peaks of traffic and that, thanks to competition and technological progress, there is currently no indication that this will change in the future.
- The fact that the European market for peering and transit is still competitive and that prices and costs for IP interconnection services continue to show a downward trend.
- That IAS providers and CAPs are mutually interdependent.
- That the IP Interconnection system is still driven by well-functioning market dynamics and by the fluid cooperation between all the players in the market, with no signals that point to the need of further regulatory intervention (that is neither asked for in the rare cases where disputes occur, that are resolved between the parties themselves).

¹ The report *“The role of Video on Demand in stimulating broadband adoption”* finds that VOD services have been a key contributor to the increase of broadband connectivity, and are associated with a gradual increase in the purchasing of broadband higher speed plans. Katz, 2024, [online] available at: <https://www.sciencedirect.com/science/article/abs/pii/S030859612400048X>

- The fact that there have been cases where incumbent IAS providers have tried to extract additional rents from CAPs for traffic termination by offering uncongested alternative routes with sufficient capacity in return from payments from CAPs; a practice that clearly constitutes a violation of the Open Internet Regulations.

Beyond our appreciation for these general conclusions of the draft report, AEVOD would also like to provide additional comments to support the above:

Regarding traffic developments (section 3) and pricing and cost developments (section 4)

- We welcome the finding in Section 3 that highlights that, thanks to competition and technological progress, there is currently no indication that the internet will not continue to cope with traffic growth and more accentuated peak traffic, as well as the finding in Section 4 that due to the same reasons, marginal network costs are observed to have declined to the point that they outweigh any increased costs associated with increased network use (and that even if peak traffic were to increase, CDNs, codecs and more efficient infrastructure could prevent transit costs from actually increasing).
- As stated above, members of AEVOD actively and significantly invest and contribute to these technological developments, by deploying delivery networks (CDNs), compression technology, caching, peering and other measures to improve the efficiency and sustainability of networks' backbone infrastructure. These actions and investments are focused both on increasing the efficiency of the content delivery while at the same time optimizing consumers' experience, by ensuring that content is delivered to them smoothly, with the best quality and without delays. Caching content closer to IAS providers' end users has substantial benefits in terms of efficiency and quality improvements, which benefits CAPs, ECNs and end users^{2,3}.
- This is relevant to the extent that, as noted by BEREC, traffic growth is mostly driven by video streaming, including the increasing diffusion of UHD video content and live streaming content⁴. Aware of this, members of AEVOD work constantly and relentlessly to further improve the efficiency of content delivery and therefore reduce costs while increasing performance, for the benefit of the whole internet ecosystem, CAPs, IAS services and consumers. The practical applications of these efforts include technological developments such as CDNs, but also innovation in codecs.
- AEVOD really welcomes that BEREC acknowledges the crucial role these developments have in the sustainability and health of the IP interconnection ecosystem and therefore the proactive effort made by CAPs, that should not be taken for granted. In fact, and as the draft report itself points out,

² An [Analysis Mason study found](https://www.analysismason.com/contentassets/b891ca583e084468baa0b829ced38799/main-report---infra-investment-2022.pdf) that in total CAPs invested over 120 billion Euros (in networks) between 2018 and 2021, resulting in a cost reduction for the global telecom industry of between 5 and 6.4 billion Euros. Abecassis, D., Kende, M., Osman, S., Spence, R. and Choi, N. (2022). "The impact of tech companies' network investment on the economics of broadband". *Analysis Mason*. October 2022 [online] Available at: <https://www.analysismason.com/contentassets/b891ca583e084468baa0b829ced38799/main-report---infra-investment-2022.pdf>

³ Analysis Mason (2022) "Netflix's Open Connect program and codec optimisation helped ISPs save over USD1 billion globally in 2021". 14 July 2022 [online]. Available at: <https://www.analysismason.com/contentassets/ef8295594cc54285bf554b05daa06431/modelling-the-impact-of-netflix-traffic-and-open-connect-on-isp-traffic-dependent-costs---2022-07-14.pdf>

⁴ BEREC, *Draft BEREC Report on the IP Interconnection ecosystem*, June 2024, page 9.

developments, investments and further efficiencies deployed by CAPs lead to growing demand from users being handled sustainably without increasing long term costs. This idea is backed by IAS providers themselves, who consistently report that they have been able to handle growth in network traffic without growth in energy consumption^{5,6} or costs⁷, and have generally exhibited stable capex intensity despite steadily growing traffic in the last decade.

- As noted in the draft report, the internet has managed to cope with traffic growth and more accentuated peak traffic since its creation, and AEVOD strongly agrees with the conclusion that, thanks to developments and efforts such as the aforementioned, this will still be the case when it comes to the reality of video streaming in the future.

Regarding market developments (section 5) and generic structure of IP Interconnection issues (section 6)

- In these sections of the draft report, BEREC finds that, in the first place, CAPs can struggle to find alternatives to reach end-users when vertically integrated IAS and transit providers leverage their termination monopoly. In fact, the draft report notes that the few IP-IC disputes that did arise stemmed from vertically integrated IAS providers attempting to leverage their termination monopoly into the transit/peering market and to introduce (higher) fees for IP-IC directly from CAPs⁸.
- This eventually leads to the conclusion that, as BEREC notes, some incumbents try to extract additional rents from CAPs for traffic termination by offering uncongested alternative routes with sufficient capacity, in return for payments from CAPs.
- From AEVOD, we welcome the recognition of the existence of such practices, and express our strongest belief that they result in market distortion and present a real risk to the preservation of unconstrained user access to the content of their choice; apart from constituting a clear violation of the Open Internet Rules.
- As mentioned in the introduction, CAPs of all sizes and the vast majority of IAS providers in the EU interconnection market are interdependent and work closely, following cooperatively and efficiently the ‘bill & keep’ principle, through private interconnections and/or public internet exchange points⁹. This is noted in the draft report, which shows that across all IAS providers (settlement-) free peering is by far the dominant form of peering, regardless of the volume of traffic the IAS provider deals with.
- However, a key risk to the competitiveness of the interconnection market is large network providers leveraging their position to extract fees. As recognized in the report, large IAS providers, with large retail market share and/or vertical integration with Tier 1 global transit networks, sometimes attempt to enforce restrictive interconnection policies, demanding fees for uncongested access to their

⁵Carbon Trust (2021). Carbon impact of video streaming. [online] Available at: <https://www.carbontrust.com/our-work-and-impact/guides-reports-and-tools/carbon-impact-of-video-streaming>

⁶ Vodafone (2021) “Investor Briefing”, June 2021 [online]. Available at: <https://investors.vodafone.com/sites/vodafone-ir/files/2021-06/vodafone-technology-investor-briefing-presentation.pdf>

⁷ McRae, N.J. (2018) “Scaling for Ultrafast, G.FAST, FTTP, 5G and the Cloud” BT. 2018 [online]. Available at: <https://indico.uknof.org.uk/event/42/contributions/555/attachments/752/924/UKNOF40-MCRAE-WEBSITE.pdf>

⁸ BEREC, *Draft BEREC Report on the IP Interconnection ecosystem*, June 2024, page 30.

⁹ European Commission, *White Paper “How to master Europe’s digital infrastructure needs?”*, Page 27.

network from CAPs and smaller IAS providers. In fact, some incumbent network providers do not accept offers from content providers for on-net CDNs¹⁰.

- From AEVOD we would like to highlight the fact that, even if it is not forbidden, the practice of seeking payments for access to a certain network, or paid peering (as opposed to providing transit to other networks), is highly unusual and most often represents a net neutrality violation. This idea is noted in Section 8 of the draft report, which finds that such practices by IAS providers can constitute a violation of the Open Internet Regulation (OIR), as ensuring the effectiveness of the OIR also entails a responsibility for IAS providers to abstain from any conduct that has the effect of compromising the provision of open internet to end-users. This is evident as customers of a certain network provider will receive poor performance on any content or service not directly connected to that network provider, despite them paying for access to the entire Internet. In that situation, the only alternative for a CAP is to either pay a termination fee or suffer congestion and quality degradation.
- Even so, from AEVOD we also support the assessment by stakeholders that regulatory intervention is not necessary (as the IP Interconnection system widely functions based on cooperation practices), and that such rare practices should be dealt with on a case-by-case assessment¹¹.

Regarding the bargaining situation (in particular) between CAPs and IAS providers (section 7)

AEVOD strongly agrees with the statement noted in the draft report that CAPs and IAS providers are mutually interdependent, where the demand from IAS providers' customers for content drives demand for broadband access and the availability of broadband access drives demand for content¹². In this sense, CAPs and IAS providers have traditionally had a collaborative and symbiotic relationship, creating cooperation in a virtuous cycle that leads to further innovation and growth.

As already mentioned, there is strong evidence that suggests that demand for access to content provided by CAPs, including high-quality Video on Demand (VOD) services, is an important factor in fueling the uptake of higher-end internet services as consumers look for faster connectivity or more generous data packages to consume such content¹³.

This demand-driving effect, overall, leads to important benefits for the EU's digital network infrastructure. On the one hand, for network providers, it brings additional revenue due to the acquisition of higher-end packages by consumers. And, on the other hand, in terms of the general development of digitisation in the EU, it also leads to increased uptake of higher levels of connectivity by consumers, in a context where,

¹⁰ WIK Consult study paragraph 16, 'Competitive conditions on transit and peering markets, Implications for European digital sovereignty'. 28 February 2022 [online]. Available at: <https://www.bundesnetzagentur.de/EN/Areas/Telecommunications/Companies/Digitisation/Peering/download.pdf?blob=publicationFile&v=1>

¹¹ BEREC, *Draft BEREC Report on the IP Interconnection ecosystem*, June 2024, page 30.

¹² BEREC, *Draft BEREC Report on the IP Interconnection ecosystem*, June 2024, page 31.

¹³ "The role of Video on Demand in stimulating broadband adoption". Katz, 2024, [online] available at: <https://www.sciencedirect.com/science/article/abs/pii/S030859612400048X>



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according to many recent reports, adoption is still running behind the high coverage levels achieved in Europe^{14,15}.

Final remarks

AEVOD thanks again BEREC for the opportunity to input to the works on the IP Interconnection ecosystem report, and overall, strongly agrees and supports the main findings of this preliminary draft, that note that the IP Interconnection ecosystem is a highly functional and competitive market, where all players cooperate due to their interdependence, and that the internet continues to be able to successfully manage traffic growth thanks to the many technological investments and innovations that are continuously incorporated to the ecosystem (also by CAPs, in a very relevant amount).

AEVOD also appreciates the acknowledgement of the challenges that CAPs face in front of the problematic practices carried out by some incumbent vertically integrated IAS providers, that try to extract additional rents from CAPs for traffic termination by offering uncongested alternative routes with sufficient capacity in return for payments for CAPs. AEVOD agrees that those practices, even if rare, constitute a violation of the Open Internet Regulations and should be approached on a case-by-case basis, with no need for further regulatory intervention (to the extent that, as the draft report says, these cases are the exceptions to the rule).

Finally, we support as well BEREC's opinion that CAPs and IAS services are mutually interdependent, and particularly, we underline the strong contribution of CAPs, including Video on Demand services, to the strength of the European network ecosystem, as the demand for their content (specially high-quality video streaming) is a crucial factor in accelerating the adoption of higher end connections and network services, to the extent that consumers seek higher and faster connectivity, including more generous data packages, to consume that content.

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¹⁴ Take up of fibre networks is lagging behind, with the report "FTTH Adoption: A Key Policy Challenge for Europe" (February 2023) noting that the take-up rate in Europe of fibre networks is yet to reach the 50% mark. [Online] Available at: <https://www.ftthcouncil.eu/resources/all-publications-and-assets/1670/position-paper-ftth-b-take-up-a-key-policy-challenge-for-europe>

¹⁵ In terms of wireless networks, the European Commission's 5G observatory reported that while 72% of the EU population is covered by at least one 5G network in 2022, only 31 million people have subscribed, resulting in a take-up rate of approximately 1%. European Commission, Directorate-General for Communications Networks, Content and Technology (2022) "5G Observatory Quarterly Report 17 October 2022". [Online] Available at: <https://5gobservatory.eu/wp-content/uploads/2022/10/QR-17-Final-v3-CLEAN.pdf>