

Net Neutrality: Myths from the Telecom Industry and Responses from Civil Society

A Guide to the Debate about Network Access Fees
aka. "Fair Share"

November 2022

Myth 1:

Europe can only succeed at the digital decade targets for network infrastructure if Big Tech starts paying Big Telcos

“ Giving up net neutrality to afford a better internet is like selling a painting to afford a better frame. – Tim Wu. ”

In several studies telecom regulators^{1 2} have found that the real bottleneck of modern broadband infrastructure rollout is civil engineering capacities and bureaucracy of overly excessive permits. More money without an increase of the civil engineering capacities might simply increase prices of already planned network infrastructure projects. Even without network access fee payments, some countries in Europe have extremely good network infrastructure and modern fibre infrastructure at over 80 % of homes. Where paid peering can be found in the EU today, the rationale is about exploitation of the local termination monopoly, not greater investment in network infrastructure. In recent public statements³, on the other hand, high-level telecom industry executives would not commit to dedicate additional payments from Big Tech to network investment.

Myth 2:

Big Tech is responsible for half of the data consumption in European networks

Data is sent to European networks because users are requesting it through the internet connection they pay for. Subscribers expect to be able to access any service of their choice on the internet. Telcos are not being paid because their own network is so great, but because they provide access to the global internet. Without demand for online services there would be no demand for internet access products.

The data provided by ETNO⁴ comes from Sandvine and is based on a global perspective of the whole internet. From the perspective of any EU country there are local media outlets, public broadcasters, online services in local languages and local or European businesses that might contribute significantly to the bandwidth used in that country, but which are obfuscated by aggregation on a global level. To require direct payments from the biggest content providers in any country creates a strong incentive for local media and businesses never to become popular enough with users to fall under the payment obligation. Any threshold to pay is a threshold for growth.

1 <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-challenges-and-drivers-of-nga-rollout-and-infrastructure-competition>

2 <https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/GlasfaserOe2018.de.html>

3 <https://www.pubaffairsbruxelles.eu/event/should-large-digital-content-platforms-pay-for-the-usage-of-networks?highlights> ; <https://www.etno.eu/events/upcoming-events/156:eu-internet-ecosystem.html> ; https://vimeo.com/710412455?embedded=true&source=video_title&owner=13775208

4 <https://etno.eu/library/reports/105-eu-internet-ecosystem.html>

Attribution of bandwidth allocation to individual businesses is almost impossible. While Netflix features prominently in the ETNO report, Disney+ is missing. Disney+ is very successful in the EU, but instead of operating its own network they choose to host their service on a CDN and can't be singled out. As the traffic numbers for Google, Amazon and Microsoft in the ETNO report include their cloud divisions, CDNs seem to be included in any payment obligation. This would trickle down to the clients of those CDNs, which include many European services. German public broadcaster ARD Mediathek, for instance, hosts at Google Cloud⁵ and many public broadcasters have their content on social media platforms like YouTube to reach their audience.

Myth 3: The “Fair Share” proposal is compatible with net neutrality

Throttling or even blocking certain online services goes against net neutrality. Giving preferential treatment in the network to companies that pay the telecom company would amount to exactly the type of paid fast lanes that net neutrality aims to prevent. Making online services pay to be reachable in a particular network is inherently against the principle of net neutrality. Making the price of internet access dependent on the services that are used, violates net neutrality. The idea that large content providers can be required to pay telcos without getting any preferential treatment in return is, at best, naïve. When telcos become dependent on payments from certain large content providers, telcos will have a clear economic incentive to maintain the existing traffic patterns.

The net neutrality law in Europe⁶ protects the right of citizens and businesses to freely use and offer services via their internet access services. Telecom companies providing internet access services are obliged to treat all traffic equally and are not allowed to discriminate against particular services, in particular not to let their commercial interests influence how they deal with traffic. Last year the ECJ⁷ concurred with civil society and consumer protection organisations⁸ when it extended this non-discrimination principle to the pricing of data packages. This has led to the abolishment of so-called Zero-Rating practices, by which telecom companies have priced some online services higher than others.

To summarise, equal treatment of traffic does not stop at the technical level when blocking or throttling an online service, but it also includes the pricing of individual online services. This is important because the Body of European Regulators for Electronic Communication (BEREC) has, since the first version of its Guidelines for Net Neutrality, established that inter-connection agreements cannot be used to circumvent net neutrality protections⁹. Therefore, every possible implementation of such a payment obligation would be in conflict with existing net neutrality legislation.

⁵ <https://cloud.google.com/customers/ard>

⁶ Open Internet Regulation (EU) 2015/2120

⁷ C-854/19, C-5/20 and C-34/20

⁸ <https://en.epicenter.works/content/closing-the-loopholes-in-eus-net-neutrality-framework>

⁹ See paragraph 5 & 6 of BoR (22) 81 <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-of-the-open-internet-regulation-comparison-document-2022-vs-2020>

Myth 4:

Big Tech makes a lot of money, thus, they should contribute to the upkeep of the network infrastructure

The bandwidth consumption of a service is not correlated with its revenue. eCommerce services like Amazon or search engines like Google or Bing are among the most profitable businesses on the internet that make about 87 % of the revenue online, yet search and eCommerce only account for less than 1 % of the bandwidth of the internet¹⁰. A proposal to redistribute wealth under the guise of “fairness” shouldn’t have a central metric that is without a link to revenue.

Myth 5:

Big Tech depends on the network infrastructure, why shouldn’t they pay for it?

The demand for bandwidth-intensive services like video-streaming, gaming or video-conferencing all drive the demand for faster internet connections. This virtuous circle was acknowledged by former digital Commissioner Neelie Kroes in her last speech to the telecom industry. She warned the Telecom CEOs to work with this virtuous circle and not against it¹¹. Everybody who participates in the internet infrastructure already contributes to it. Every online service pays for their hosting, and the biggest online services put forward numbers with significant contributions to network infrastructure and service quality.

Moreover, the cost of bringing online services to the user doesn’t solely fall on the telecom provider. Data centres used for hosting, undersea cables, local caching servers and internet exchanges (IXPs) all play a vital role in the internet infrastructure. A recent report from Analysys Mason¹² found that content and application providers invested over 120 billion euros between 2018 and 2021 and, in the period of 2011 and 2021, the amount reached 883 billion euros. In the period from 2018 to 2021, the network-related cost for telecom companies has risen only 3 % while the data volumes in that time frame have risen 160 %, the Analysys Mason report found. Usually, they all follow the principle of bill and keep, which means they get their money from their own (business or consumer) customers. Good service quality for the end-user depends on the collaboration of actors in the chain. For example, local caching servers bring the content as close to the user as possible, which improves service quality and even reduces stress on the network by not having to send data streams across networks. Local caching servers reduce the interconnection costs for telcos, e.g. transatlantic network capacity, since traffic is delivered to their doorstep. The report from Analysys Mason estimates the cost reduction for the telecom industry through network investments of content application providers to be between 5 and 6.4 billion euros.

10 https://mcusercontent.com/e582e02c78012221c8698a563/files/dc52d5a8-2608-b726-30ef-88cbe58435b4/Net_neutrality_in_the_UK_Networks_vs_content_2022_001_.pdf

11 https://ec.europa.eu/commission/presscorner/detail/de/SPEECH_14_647

12 <https://www.analysismason.com/contentassets/b891ca583e084468baa0b829ced38799/main-report---infra-investment-2022.pdf>

Myth 6:

The ETNO/Axon report gives a neutral and scientific basis for the discussion

The Axon study was paid for by the ETNO association. Brian Williams has provided a detailed analysis of all the methodological flaws in that report¹³. The neutral telecom regulators of BEREC could not find evidence for the claim that big content providers are “free riding”. On the contrary, in their recent study on the topic they could not substantiate the argument from ETNO that the increase in data volume has led to an increase in cost for the telecom companies¹⁴. BEREC has even warned that in the worst case such a model could do “significant harm to the internet ecosystem”. Scientists from TU Berlin and MIT have analysed the claims of the ETNO report further and found that that the fundamental assumption of an investment gap is an unproven hypothesis that is not supported by any evidence¹⁵. Like in the whole net neutrality debate, the claim that telcos will stop making money and therefore stop investing in their own network is disproven by the historical evidence¹⁶.

Myth 7:

The internet has so many negative consequences on our society, maybe it's time for a change

Net neutrality is one of the things that differentiates the internet from other communication networks. In the TV world content providers had to be selected by network provider to be part of a TV package and the bandwidth of a TV subscription was technically limited so it could only carry a few channels. In several member states public broadcasters had to enter into confidential agreements with telecom companies to have their content carried over cable networks. In the telephony era the network operator of the calling party had to pay the network operator of the receiving party (Calling Party Network Pays). The internet is inherently different. There is no technical limitation in the amount of networks that can be attached to it or the amount of online services that can be transmitted via the internet, the network is neutral and allows for new innovation without permission from anyone, including the telecom companies. Taking business models from the past and forcing them onto the modern internet will have disastrous consequences as it will undercut the internet's potential. Telecom regulators have warned twice in 2012^{17 18}, in

13 [https://static1.1.sqspcdn.com/static/f/1321365/28531995/1657135490797/](https://static1.1.sqspcdn.com/static/f/1321365/28531995/1657135490797/Internet+Traffic+Tax+1.pdf?token=c41MPtZmVRcVbml%2FJ6zv8%2Fjpf%2F8%3D)

[Internet+Traffic+Tax+1.pdf?token=c41MPtZmVRcVbml%2FJ6zv8%2Fjpf%2F8%3D](https://static1.1.sqspcdn.com/static/f/1321365/28531995/1657135490797/Internet+Traffic+Tax+1.pdf?token=c41MPtZmVRcVbml%2FJ6zv8%2Fjpf%2F8%3D)

14 <https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-preliminary-assessment-of-the-underlying-assumptions-of-payments-from-large-caps-to-isps>

15 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4263096

16 <https://www.techdirt.com/2019/09/30/massive-study-proves-once-all-that-no-net-neutrality-did-not-hurt-broadband-investment/>

17 <https://www.berec.europa.eu/en/document-categories/berec/others/berecs-comments-on-the-etno-proposal-for-ituwcit-or-similar-initiatives-along-these-lines>

18 <https://www.berec.europa.eu/en/document-categories/berec/reports/an-assessment-of-ip-interconnection-in-the-context-of-net-neutrality>

2017¹⁹ and in October 2022²⁰ that these regulatory experiments of “Sending Party Network Pays” could have serious negative consequences for the internet ecosystem, the economy and consumers. One of the main concerns of this model is that the dominant market position of Big Tech would be cemented for perpetuity. They would be the only players who can afford to pay the network access fees to all networks they want to be reachable in. Their competitors would effectively be barred from ever reaching their size. Every threshold under which these payments don’t have to be paid is also a threshold for growth.

Myth 8:

We can design these new payments so that only the rich Big Tech companies pay

Introducing these new network access fees will make many services in Europe for customers and businesses more expensive. In effect, everyone will pay more to the benefit of the telecom industry. Streaming companies like Netflix will most certainly pass the cost down to customers by raising subscription prices. Cloud services like Google, Microsoft and Amazon will probably do the same – only that their customers are schools, SMEs or public broadcasters. This effect is already visible in the case of other hosts that had to offer double-paid options for their customers because the connection to the network of some big telecom operators is far more expensive than any other inter-connection agreement, so they had to hand down the cost²¹. If such practices are no longer limited to just a few very big telecom companies in their home markets, we will see a price increase throughout the digital economy.

Many SMEs, eLearning and eGovernment services rely on cloud infrastructure, too. In the most likely scenario, the prices for all those European companies, consumers and public institutions with their CDN providers would increase. Additionally, privacy-preserving technologies like VPNs, Tor or Apple Privacy Relay make attribution of bandwidth use to any particular content providers technologically impossible. With a widespread use of Apple Privacy Relay it would be impossible to attribute a large part of mobile network data use to any content provider.

Myth 9:

This proposal is supported by the whole telecom industry and will not be bad for competition

The more internet users a telecom company has, the more money it can make with such termination fees by keeping their users online. We have decades of evidence about this effect from the telephony era. Termination fees were a

19 <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-on-ip-interconnection-practices-in-the-context-of-net-neutrality#:~:text=In%202012%20BEREC%20published%20the,patterns%20and%20in%20business%20models>

20 <https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-preliminary-assessment-of-the-underlying-assumptions-of-payments-from-large-caps-to-isps>

21 <https://www.golem.de/news/hetzner-und-netzneutralitaet-extrakosten-fuer-bessere-anbindung-an-telekom-kunden-1511-117711.html>

common practice under the model of Calling Party Pays²², which is the basis for the Sending Party Pays proposal from 10 years ago²³ and today²⁴. Commercial information networks have a tendency for monopolies and oligopolies²⁵. A stable network with reasonable prices and good service quality can only be achieved in a competitive telecoms market. Termination fees favour the incumbent players because as the biggest kid in the school yard they have control over the majority of users, which allows them to dictate prices to everyone else. We already see this negative effect of market dominance in the inter-connection market, with examples of big telecom companies extorting money from research institutions²⁶, community broadband networks and local SMEs that offer hosting services²⁷.

Smaller telecom companies invest more in their networks and connect more households with modern broadband connection than the much bigger incumbents²⁸. This in itself is a strong indicator that money is not the all-deciding factor in building modern network infrastructure. But regulation of the telecom market that might hurt the ability of the smaller players to compete with the bigger ones would even hurt network investment. This is why a group of smaller telecom companies has already issued a statement in which they are warning that this proposal could impact their ability to compete and survive²⁹.

Myth 10: South Korea leads the way, their experience with this model is great!

South Korea has started in 2016 step by step to introduce the sending party pays model. The effect was that many content providers have left the country and moved their data centres outside of the South Korean jurisdiction in order to avoid the new network access fees³⁰. This meant that South Korean telecom companies had to invest money to build up inter-connection capacity with outside internet exchange points or invest in direct transit. Without local caches provided by the large content providers, more traffic must be routed internationally, on network links paid for by the South Korean telcos. This has in turn led to a situation where the South Korean digital economy is facing significant challenges with their global connectivity, leading to harm for Korean consumers and digital exports³¹. According to OECD figures the latency in

22 https://en.wikipedia.org/wiki/Calling_party_pays

23 <https://etno.eu/datas/itu-matters/etno-ip-interconnection.pdf>

24 <https://etno.eu/downloads/reports/europes%20internet%20ecosystem.%20socio-economic%20benefits%20of%20a%20fairer%20balance%20between%20tech%20giants%20and%20telecom%20operators%20by%20axon%20for%20etno.pdf>

25 <https://scholarship.law.columbia.edu/books/176/>

26 <https://www.heise.de/newsticker/meldung/Deutsches-Forschungsnetz-und-Telekom-Peeren-in-Zeiten-von-Corona-4694172.html>

27 https://www.bundesnetzagentur.de/EN/Areas/Telecommunications/Companies/Digitisation/Peering/download.pdf?__blob=publicationFile&v=1 and <https://www.golem.de/news/hetzner-und-netzneutralitaet-extrakosten-fuer-bessere-anbindung-an-telekom-kunden-1511-117711.html>

28 https://www.brekoverband.de/site/assets/files/13870/breko_broadband_study_21.pdf

29 <https://mvnoeurope.eu/mvno-europe-position-paper-on-network-investment-contributions/>

30 <https://www.internetsociety.org/resources/doc/2022/internet-impact-brief-south-koreas-interconnection-rules/>

31 <https://www.incompas.org/Files/filings/2022/04-25-22%20FINAL%20ITI%20INCOMPAS%20White%20Paper%20on%20Korea%20network%20fee%20issue.pdf>

the experienced internet quality has deteriorated significantly over the past years³². In the most recent round of proposed tightening of the rules around the increase in demand for Netflix' video streaming services with the release of the popular series "Squid Game" more South Korean business are raising their voice about the challenges the new regulatory environment brings, particularly for latency sensitive services like gaming and video calls³³.

Although we don't support the rest of the analysis of the recent Ofcom net neutrality consultation³⁴ to relax safeguards, they do acknowledge the risks of the network fee proposal:

“ (7.61) We acknowledge that in principle there could be benefits to a charging regime, particularly in improving the incentives on CAPs to deliver traffic efficiently. However, we also recognise the difficulties of designing an effective scheme, the risks and uncertainty such a change could create, and the unclear impact on consumers. A charging regime would be a significant step and we have not yet seen sufficient evidence that such an approach would support our objectives at this time. We also consider our other proposals provide flexibility that should help mitigate several issues identified by ISPs. ”

Honest Question 1:

How realistic is it that the telecom industry will succeed?

EU Digital Commissioner and Ex-France-Télécom-CEO Thierry Breton has taken this issue up on a personal level. He will not back down from the demands of the telecom industry. It increasingly appears to be a personal matter. The question is, if he has the agreement of his peers. This issue is not in the work program of the EU Commission for this term³⁵ or for 2023³⁶. There never was an impact assessment for it and a public consultation was only agreed to after seven countries called on the Commission in a public letter to follow due process, have a consultation and listen to the guidance of BEREC³⁷. This procedure is very different from the normal due diligence that can be expected from European law-making. It was a fight to even get BEREC to be allowed to issue their assessment on the ideas of ETNO. Lobby events from the Telecom industry in Brussels would not accept civil society or consumer protection organisations in the room, not even as participants. It appears the debate is being shielded from arguments and framed as a simple Big Tech vs. Big Telco fight, leaving out all other affected groups like public broadcasters, media regulators, consumer protection organisations, internet exchanges, SMEs, eLearning providers and schools, the gaming industry, etc.

³² https://www.oecd-ilibrary.org/science-and-technology/broadband-networks-of-the-future_755e2d0c-en (page 50ff)

³³ <https://www.medianama.com/2020/08/223-net-neutrality-south-korea/>

³⁴ https://www.ofcom.org.uk/_data/assets/pdf_file/0028/245926/net-neutrality-review.pdf

³⁵ https://ec.europa.eu/info/sites/default/files/political-guidelines-next-commission_en_0.pdf

³⁶ https://ec.europa.eu/info/sites/default/files/cwp_2023.pdf

³⁷ <https://www.permanentrepresentations.nl/documents/publications/2022/07/19/call-for-a-careful-process-in-light-of-the-current-debate-on-otts>

54 MEPs from all sides of the political spectrum sent an open letter to Commissioners Vestager and Breton raising serious concerns about this issue³⁸. In their response the Commissioners called the concerns of the 54 elected Parliamentarians “completely misguided”³⁹. While the Commission is calling on everybody not to believe press rumours, they decline to provide clear answers on the direction of their proposal and whether it will include the inter-connection market or not.

Honest Question 2: What timeline can we expect?

According to Politico⁴⁰, we can expect a confidential survey over the Christmas holidays of Big Tech and Big Telco about their inter-connection practices. Critically, the Internet Exchanges seem not to be included in that survey. As neutral platforms for inter-connection that have existed for decades, they have the best understanding of the market and can provide neutral data, also because they are not party to the conflict. It was suggested to the Commission to include Internet Exchanges in their survey. The public consultation is scheduled for the first half of 2023. On 30. April 2023 the second review report for the Open Internet Regulation (EU) 2015/2120 has to be sent from the Commission to the European Parliament and Council⁴¹. By then we will know if we also face a full-frontal attack of net neutrality itself. Rumours are that the telecom industry wants to introduce loopholes in the safeguards around specialised services under the guise of 5G network slices. This question was thoroughly analysed by BEREC from 2018 till 2022 and conclusively addressed in a previous update to the Net Neutrality Guidelines.⁴² The latest realistic date for the announcement of new legislation in this term would be September 2023.

Honest Question 3: What shall we do now?

By reading this document you have done the first step: educate yourself. The next step is to educate others. Raise your voice and join the debate. Continue to read about this issue and use your network and whatever organisation or group you are a part of, to speak out in support of net neutrality. We live in an information society where net neutrality is central to all of us, our education, work, democracy and freedom of speech. We have won the net neutrality debate in Europe in the past by helping all stakeholders to get a voice in it. This time it will be harder, but also more people than seven years ago will now understand the issue and join us. Do not accept the claim that the proposal only

38 https://www.patrick-breyer.de/wp-content/uploads/2022/07/20220712_COM_Access-Fees-MEP-Letter_final3.pdf

39 <https://www.patrick-breyer.de/wp-content/uploads/2022/10/Reply-to-letter-from-MEPs-of-12-July-2022.pdf>

40 According to Politico Morning Tech Newsletter from 27. October 2022

41 The first review was conducted in April 2019 <https://digital-strategy.ec.europa.eu/en/library/commission-report-open-internet>

42 <https://www.berec.europa.eu/en/open-internet/5g> and <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-of-the-open-internet-regulation>

concerns Big Tech and telecom providers. The future of the internet is at stake as net neutrality is threatened. In practical terms it is important to reach out to the Members of the European Parliament⁴³ and to the Commissioner⁴⁴ from your country and talk with them about net neutrality.

Useful Links

- BEREC has analysed the proposal for a „fair share“:
<https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-preliminary-assessment-of-the-underlying-assumptions-of-payments-from-large-caps-to-isps>
- 34 digital and human rights NGOs from 17 countries around the world have criticised the proposal:
<https://en.epicenter.works/document/4146>
- The European Consumer Protection organisation BEUC has criticised the proposal in their position paper:
https://www.beuc.eu/sites/default/files/2022-09/BEUC-X-2022-096_Connectivity_Infrastructure-and-the_open_internet.pdf
- The German consumer protection organisation VZBV has criticised the proposal in their position paper:
<https://www.vzbv.de/en/sending-party-pays-proposal-endangers-open-and-free-internet>
- 29 Internet Experts and Academics send a Letter to the Commission urging to abandon the “Sending-Party-Network-Pays” proposal:
<https://www.komaitis.org/personal-blog/29-internet-experts-and-academics-send-a-letter-to-the-commission-urging-to-abandon-the-sending-party-network-pays-proposal>
- Analysys Mason has conducted an economic analysis of the proposal:
<https://www.incompas.org/Files/2022%20Tech%20Investment/FINAL%20Abstract%20and%20Executive%20Summary%20-%20Analysys%20Mason%20Report.pdf> info graphic: <https://www.incompas.org/Files/2022%20Tech%20Investment/FINAL%20Main%20Infographic%20Analysys%20Mason.pdf>
- 54 MEPs have raised concerns about the plans of the Commission:
https://www.patrick-breyer.de/wp-content/uploads/2022/07/20220712_COM_Access-Fees-MEP-Letter_final3.pdf
- Seven EU member states have criticised the due diligence of the Commission: <https://www.permanentrepresentations.nl/documents/publications/2022/07/19/call-for-a-careful-process-in-light-of-the-current-debate-on-otts>

43 <https://www.europarl.europa.eu/meps/en/home>

44 https://ec.europa.eu/commission/commissioners/2019-2024_en