Network Fees: TRAI Submission

Submission to the Consultation of Indian Telecom Regulator TRAI

INTRODUCTION

We want to thank TRAI for the opportunity to participate in the consultation on Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services[1]. Epicenter.works exists since 13 years as a non-profit NGO and has the mission to protect and promote human rights in the digital age. We have been focused on net neutrality since 2012 and were deeply involved in the creation of the EU Open Internet Regulation.[2] While our main work focus on the issue is the European Union, we have participated in the global net neutrality debate over many years[3]. Given the reference to the EU debate on this issue, we hope that this contribution can be useful for TRAI's deliberations and the debate in India.

For the sake of consistency with the language applied in the global debate on this issue, we will use the term "network fees" in this submission to refer to the proposal under consideration to establish a Sending Party (Network) Pay or "fair contribution" model. Furthermore, we use the term "Content and Application Provider (CAP)" for Over-The-Top (OTT) Communication Services. Our response will be limited to questions relating to the network fee debate.

RESPONSES TO INDIVIDUAL QUESTIONS

Question 8) Whether there is a need for a collaborative framework between OTT communication service providers and the licensed telecommunication service providers? If yes, what should be the provisions of such a collaborative framework? Kindly provide a detailed response with justification.

There is no evidence for a so called "investment gap"

For decades, telecom companies have been rolling-out ever more modern and capable network infrastructure while remaining profitable. This success was made possible because of the regulatory framework of the open internet that separates infrastructure from content. Content drives demand for internet access and gives telecom companies a product that people want to buy. Telecom companies provide the access products to make that content available to users. The virtuous circle between the two is only made possible by their separation. Contrary to vertically integrated networks like television, an internet subscription remains valuable to consumers irrespective of the content they favor in any given moment. Content providers can rely on their services being reachable worldwide irrespective of contractual relationships with telecom companies whose customers might want to reach them. Vertically integrating this value chain would be a drastic departure and risks undermining the proper functioning of the open internet as an engine for innovation and economic prosperity.

1 https://www.trai.gov.in/consultation-paper-regulatory-mechanism-over-top-ott-communication-services-and-selective-banning
2 https://en.epicenter.works/thema/net-neutrality
3 https://en.epicenter.works/documents?field_tags_tid=4 and https://en.epicenter.works/document/4422

One should also question what the driving factors and bottle necks for the roll-out of next generation networks really are. That question was investigated by European regulator BEREC in 2016[4] and Austrian regulator RTR in 2018[5]. Both come to similar conclusions: money is not the deciding factor that limits the roll-out of modern high capacity networks. More importantly in a comparative analysis are the administrative hurdles for obtaining building permits and civil engineering capacities.

Furthermore, a simple comparison of revenues between Big Tech and Big Telco is also misleading. The business model of providing network access carries fewer risk and more stable return than offering online services. Telecom companies have a low risk, low reward business model. CAPs have a high risk, high reward business model. Bigger CAPs have found ways to lock-in their users in their ecosystem so as to stabilize their market position. Net neutrality aims to prevent telecom companies from excising their termination monopoly over the end-user as they control the access the user has to the internet and CAPs have to the user. Allowing any form of network fees to be established risks creating a vicious circle in which telecom companies no longer enter into inter-connection agreements based on optimal network design to improve quality of service for the internet user, but instead optimize for monetary compensation for all traffic flowing into their network. Ultimately, this could also lead to a fragmentation of the internet with traffic of less financially viable CAPs from other world regions being marginalized on congested transit connections. The problem of any inter-connection regulation is that transit to eyeball networks will have to deteriorate to a level which makes it economically viable for the CAP to enter into direct inter-connection agreements. Thereby, the quality of service for smaller CAPs will be affected, no matter which limit for any payment obligation is established. Such a limit for a payment obligation[6] would also act as a limit on growth for any entrant CAP trying to grow in a particular market.

The optimal network topology can't be achieved by monetizing inter-connection agreements

Content Delivery Networks fulfill a vital function in the delivery of content and applications in high quality to the user. By bringing the content as close as possible to the user and operating caching servers in many networks the telecom operators benefit from a reduced strain on their networks and inter-connection capacity. That leads to a reduction of network traffic which even has positive effect in lower energy consumption and CO2 emissions by the network operator. According to a report from Analysys Mason the investment of CAPs and CDNs has increased far more proportionately with the increase of internet traffic than the cost of telecom companies has to roll-out networks and provide access services to users.[7]

Nevertheless, several very large telecom companies have refused to host caching servers in their network or offer inter-connection agreements to CDNs. If there is even a case to be made for regulatory intervention, it is in the obligation to those telecom companies to offer hosting services within their network and to reach inter-connection agreements at prices that are not aimed at maximizing profits but covering costs.

CAPs and ISPs are co-dependent in a virtuous circle where both contribute to service quality

The investments of CAPs is very significant for the delivery of high quality services and even reduces the strain on the networks of telecom companies. CAPs have to scale their hosting infrastructure

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

5 https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/GlasfaserOe2018.de.html

6 Several telecom industry representatives have suggested that above 5% network share a CAP falls under payment obligations.

7 https://www.analysysmason.com/contentassets/b891ca583e084468baa0b829ced38799/main-report---infra-investment-2022.pdf

proportionately to the demand for their service and a lot of that requires also investment in data centers, local caching infrastructure, etc. While we would prefer critical infrastructure such as undersea cables for global information systems not to be owned by individual companies, shifting monetary compensation from Big Tech to Big Telco wouldn't solve this problem and might even lead to an infrastructure war that deteriorates service quality and fragments the internet.

Any regulatory intervention that monetizes inter-connection agreements would discourage optimizations like caching services and lead to poorer service quality for the customers. We can see in South Korea that even though the country has a very high FTTH penetration, the network fee regulation in the country has led to a deterioration of the quality of service for end-users over the past years.[8] In recent OECD figures South Korea has fallen significantly behind other countries in the latency of the internet quality experienced by the majority of its users.[9] This negative effect should be alarming for any regulator and was also acknowledged by BEREC in their assessment of the network fee proposal.

Lastly, before any regulatory intervention can even be considered, a market failure has to be demonstrated. This has not happened and a study commissioned by the German regulator BNetzA even found that the inter-connection market has mostly been working seamlessly in the absence of any regulatory intervention.[10] This conclusion was confirmed by several other European regulators, as cited below.

Network Fees will not lead to further network roll-out

Purpose limitations of any form of network fees for network roll-out are very hard to define and enforce. Any newly established network fees could easily be repurposed for profit margins and, instead, existing network roll-out investments would simply be relabeled as being financed by the new fee. Such a purpose limitation of funds would require enormous administrative efforts to ensure a specific purpose for these funds. In the European debate around network fees high-level representatives of the telecom industry were unwilling or unable to commit to allocating any new revenues to network investments.[11] For further investigation into the economic theory underpinning the issue, the Dutch government commissioned a study by Oxera[12], which concludes that such a policy would introduce substantial setup and transaction cost in a market that is so far unregulated and shows no sign of market failure.

The current investment model is working and regulatory intervention will cause harm

With every new generation of network equipment and mobile network standards the capacity of networks to handle larger traffic volumes increases significantly while the costs in network buildup remain relatively stable. Technological development of network equipment gives telecom companies the ability to handle traffic increases with a stable level of investment.

The unprecedented spike in internet traffic during the COVID-19 pandemic has proven the resilience of networks to keep up with unforeseen demand increases. Additionally, we see traffic growth reducing in the past years. Both Nielsens Law – which predicts high-end connection speeds grows by 50% per year – seems to no longer be applicable and the reduced uptake of high-speed internet connection in

8 https://www.internetsociety.org/resources/doc/2022/internet-impact-brief-south-koreas-interconnection-rules/
9 https://www.oecd-ilibrary.org/science-and-technology/broadband-networks-of-the- future_755e2d0c-en (page 50ff)
10 https://www.bundesnetzagentur.de/EN/Areas/Telecommunications/Companies/Digitisation/Peering/download.pdf
11 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
12 https://open.overheid.nl/documenten/ronl-8a56ac18a98a337315377fe38ac0041eb0dbe906/pdf

many countries provide evidence for a saturation in the internet access market.[13] An investigation into the inter-connection market by German regulator BNetzA concluded that traffic growth is stable and attributed this to a saturation of the video-streaming market.[14]

As has been noted by Analysys Mason in their recent assessment on traffic growth, the numbers circulated in this debate are often biased towards political goals of certain actors.[15] This report is underlined by a recent investigation of Spanish telecom regulator CNMC into wholesale prices that found Telefonica had publicly inflated the traffic growth numbers in Spain in the context of the network fee debate.[16] There is no credible evidence to support claims about significant traffic growth and also no evidence that any such growth would be beyond conservative assumptions on efficiency gains of network equipment.

In this context it might be relevant to point towards the statement of EuroIX – the European umbrella of Internet Exchange points, which includes the biggest Exchange of the world De-CIX.[17] Internet Exchanges are an often overlooked stakeholder in this debate that is uniquely equipped with a high expertise on the day-to-day realities of inter-connection agreements that would not stand to significantly gain or lose with the network fee debate. EuroIX warns the European Commission that any proposal for network fees risks introducing systemic weaknesses in critical infrastructure and could reduce the quality of service for end-users. Similar arguments that point to problems being created with such a proposal for the stability and resilience of the internet can also be found from other experts in the market. The German association ECO which consists of many internet companies has issued a position paper in which they explain the facts about the inter-connection market and why this proposal doesn't make a lot of sense from a practitioner perspective.[18]

Question 9) What could be the potential challenges arising out of the collaborative framework between OTT communication service providers and the licensed telecommunication service providers? How will it impact the aspects of net neutrality, consumer access and consumer choice etc.? What measures can be taken to address such challenges? Kindly provide a detailed response with justification.

Users already pay for the traffic sent to ISP networks

CAPs do not send traffic to Indian networks unilaterally. This is not how the internet works. Paying customers of Indian ISPs are requesting data packages to be sent to Indian networks. Users are not paying for internet subscriptions to be in the networks of telecom companies, but to access content and applications from the wider internet. The access to all services on the internet is the product of ISPs. Without CAPs there would be nearly no demand for internet subscriptions in the first place. In its in-depth analysis of the network fee proposal BEREC also highlights that upgrades to the inter-connection capacity only carry minor cost for ISPs.[19]

13 https://www.businesswire.com/news/home/20210520005744/en/Strategy-Analytics-Fixed-Broadband-Traffic-Growth-Slowing
14 https://www.bundesnetzagentur.de/EN/Areas/Telecommunications/Companies/Digitisation/Peering/download.pdf
15 https://www.analysysmason.com/research/content/regional-forecasts-/fixed-network-data-rdfi0-rdmb0/
16 https://www.cnmc.es/sites/default/files/4653413.pdf or https://bandaancha.eu/articulos/cnmc-dice-trafico-telefonica-crece-mucho-10601
17 https://www.euro-ix.net/media/filer_public/91/7a/917a92e8-77b0-4d29-bdfc-dd68bce9a523/spnp_impact_on_ixps_-_final.pdf
18 https://international.eco.de/download/209997/
19 BoR (23) 131d: https://www.berec.europa.eu/en/document-categories/berec/others/berec-input-to-the-ecs-exploratory-consultation-on-the-future-of-the-electronics-communications-sector-and-its-infrastructure

Furthermore, CAPs invest significantly in the development of new encoding standards that have reduced the necessary bandwidth to transmit multimedia content over the past years. This development was not financed by ISPs, while they are equal beneficiaries of such technological advances. Technologies like Adaptive Bitrate are tailored to optimize available bandwidth for the best user experience when streaming high bandwidth video content. Should the ISP sell connections to users that in aggregate are above the network capacity they can handle, they have over-provisioned and oversold their network and investing to upgrade their network is inevitable. It is not the fault of the CAPs that consumers use the internet subscription they have paid for.

Broad rejection against EU attempts to establish Network Fees

The European Commission is bound by the "better regulation principles" to follow proper due diligence standards of evidence-based policymaking whenever it is considering new legislation. This includes taking into account the views of affected stakeholders[20]. On the issue of network fees, however, the Commission does not follow these due diligence standards, as was pointed out by seven major EU member states in an open letter.[21] Contrary to established practice, this issue is not included in the work program of the Commission for this term or this year. Nor has there been, in general, an impact assessment or a proper consultation on any planned regulatory activities of the Commission. The public consultation the Commission launched earlier this year was only of exploratory nature and doesn't relieve the Commission from living up to the obligation it created for itself to launch a proper consultation or publish an impact assessment. In December 2022, the governments of six EU member states demanded clarity from the Commission on this matter.[22] The Commission on its part, however, has remained silent and so far not committed to an impact assessment. The past of digital Commissioner Thierry Breton as CEO of France Telecom before taking on his current position is a sad reason and explanation of this breach of protocol. We hope TRAI doesn't follow the bad example Europe is setting in this issue.

Furthermore, the responses to the exploratory consultation of the European Commission have not been published, even two months after the consultation deadline.[23] The reports analyzing the consultation responses have not been published either and there are media reports that rumor it will be delayed after the European summer break of 2023.[24] This leaves us without a complete record of all consultation responses. Luckily, many stakeholders have nevertheless published their position, which allows us a glimpse of the EU debate on network fees.

The majority of governments of EU member states have rejected the network fee proposal. As Reuters reported, in a meeting of the European Council of Telecom Ministers in June 2023 a long list of countries have voiced their rejection.[25] Among the most outspoken critics are Germany[26], the

20 https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/better-regulation_en
21 https://www.permanentrepresentations.nl/documents/publications/2022/07/19/call-for-a-careful-process-in-light-of-the-current-debate-on-otts
22 https://www.reuters.com/business/media-telecom/germany-others-demand-clarity-eu-plan-telco-network-costs-2022-12-02/
23 https://www.asktheeu.org/en/request/all_replies_to_the_public_consul
24 https://www.euractiv.com/section/digital/news/algorithmic-management-in-the-workplace-cyber-resilience-acts-positions/
25 https://www.reuters.com/business/media-telecom/majority-eu-countries-against-network-fee-levy-big-tech-sources-say-2023-06-02/
26 https://www.bundestag.de/presse/hib/kurzmeldungen-936322

Netherlands[27], Denmark[28] and Austria[29]. The Belgian telecom regulator BIPT released a draft communication in which they state that "today the need for mandatory payments from Internet platforms to network operators is not sufficiently demonstrated in Belgium".[30] Even former supporters of the proposal like Italy have recently stated that the Italian government is not in favor of establishing a new fee anymore.[31] The Italian telecom minister justifies this reversal of their position in detail.[32]

The German Monopolies Commission warns about the negative impact such a proposal would have on competition and rejects it.[33] Opposition also comes from within the telecom industry. The association of virtual mobile network operators, MVNO Europe, issued a statement in which they see their ability to compete hindered under such a proposal.[34] Similarly, a group of small telecom companies in France has also rejected the idea.[35]

The consideration of network fees also has to take into account questions of media plurality. Several media regulators have started to take positions on the question and often they have shared competency with telecom regulators on questions that concern their field. The European Association of Public Broadcasters, EBU, has issued a clear statement rejecting the proposal.[36] Also the European Association of Private Broadcasters, ACT, has publicly rejected the proposal.[37] Both see themselves affected and fear being faced with higher prices to offer their media services to the public. This is particularly relevant as telecom lobbyists have tried to appease these groups with carve-outs to any upcoming regulation. But as many broadcasters are on social media platforms, rely on CDN services and have very significant traffic volume shares comparable to other "Video on Demand" services, they nevertheless see the damage the network fee proposal would far outweigh any benefits.

The umbrella of all consumer protection organizations within Europe is a stark critic of the proposal as they fear it would lead to higher prices for consumers, reduce service quality and be in conflict with net neutrality.[38] Civil society organizations were among the first to issue critical statements[39] concerning the European Commission's plans, with several statements supported by academics[40] and one also by companies and other interest groups[41].

Any form of payment obligation based on inter-connection traffic flows would hurt net neutrality

The problems outlined with the network fee proposal can't be rectified by shifting it from an ex-ante price regulation or collective bargaining to an ex-post system with final offer arbitration or regulatory

27 https://www.rijksoverheid.nl/documenten/publicaties/2023/02/27/plans-for-charging-internet-toll-by-large-telecom-companies-feared-to-have-major-impact-on-european-consumers-and-businesses and https://www.government.nl/latest/news/2023/02/27/dutch-minister-adriaansens-internet-toll-will-ultimately-penalize-consumers
28 https://www.ft.dk/samling/20222/almdel/KEF/bilag/264/2698970.pdf
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30 https://www.reuters.com/business/media-telecom/germany-others-demand-clarity-eu-plan-telco-network-costs-2022-12-02/
31 https://www.key4biz.it/fair-share-butti-tassa-su-internet-litalia-chiedera-alla-ue-di-approfondire-ritardi-di-open-fiber-situazione-critica/449982/
32 https://www.euractiv.com/section/digital/interview/italys-digital-state-secretary-defines-senders-pay-initiative-premature/
33 https://www.monopolkommission.de/images/Policy_Brief/MK_Policy_Brief_12.pdf
34 https://mvnoeurope.eu/mvno-europe-position-paper-on-network-investment-contributions/
35 https://www.aota.fr/2022/11/17/tribune-le-monde-position-de-laota-sur-le-fairshare/
36 https://www.ebu.ch/files/live/sites/ebu/files/News/Position_Papers/open/2023/EBU_position_future_of_electronic_communications_ECConsultation-FINAL.pdf
37 https://www.acte.be/publication/tv-vod-statement-on-network-fees/
38 https://www.beuc.eu/sites/default/files/2022-09/BEUC-X-2022-096_Connectivity_Infrastructure-and-the_open_internet.pdf
39 https://en.epicenter.works/document/4146
40 https://en.epicenter.works/document/4469
41 https://en.epicenter.works/document/4660

intervention once inter-connection disputes spiral out of control. It is important to stress that this also applies to any proposal to establish a negotiation mandate to force CAPs to come to the table with ISPs.[42] None of this solves any of the problems outlined by stakeholders in this debate.

Other Telecom Regulators reject the Network Fee proposal

EU Regulator BEREC investigated the issue in the ongoing net neutrality debate twice. In the 2022 preliminary assessment[43] BEREC found that there was no objective evidence for a market failure that would justify such a regulatory intervention. BEREC also stated that any such intervention would do "significant harm to the internet ecosystem", which would allow ISPs to exploit their termination monopoly.

In the more recent full statement[44] BEREC added to this preliminary analysis by stating that net neutrality would be violated by such payment obligations and end-user rights might be restricted. It is important to stress, that Telefonica wrongfully claimed that such a net neutrality violation would not be inherent to their proposal.[45] BEREC saw particular dangers for distortion of competition, both between telecom companies and between CAPs. The regulator continued by stating that this would likely lead to higher prices for content subscriptions, because CAPs would simply pass on the cost to the consumer. Most importantly, BEREC did not see an "investment gap" on the side of telecom companies. Quality of Service for end-users could even deteriorate for end-users and resilience of the global internet would be hurt.

The British Regulator Ofcom investigated the network fee issue in its recent proposed rule making.[46] The conclusion was that there are significant difficulties in designing such a scheme and that this would create risks and uncertainty for consumers. Ofcom couldn't find clear reasons for such an intervention nor if such intervention would even be helpful in achieving the proposed goals of further network roll-out.

A comprehensive list of voices that have taken a position in the debate, as well as studies on the issue can be found online.[47]

We have collected a comprehensive summary of arguments and counter-arguments in this network fee debate.[48] Epicenter.works has also provided contributions on this issue in the consultation of the European Commission[49] and the consultation of the Brazilian regulator Anatel[50].

Sincerely,

Epicenter.works – for digital rights

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42 https://cyberlaw.stanford.edu/blog/2023/07/eu-telecoms-newest-proposal-force-websites-pay-them-just-terrible-their-previous-one

43 BoR (22) 137: https://www.berec.europa.eu/system/files/2022-10/BEREC%20BoR%20%2822%29%20137%20BEREC_preliminary-assessment-payments-CAPs-to-ISPs_0.pdf

44 BoR (23) 131d: https://www.berec.europa.eu/en/document-categories/berec/others/berec-input-to-the-ecs-exploratory-consultation-on-the-future-of-the-electronics-communications-sector-and-its-infrastructure

45 https://cyberlaw.stanford.edu/blog/2023/07/yes-telefonica-forcing-apps-pay-isps-violates-net-neutrality

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

47 https://radiobruxelleslibera.com/2023/04/11/the-fair-share-repository/

48 https://en.epicenter.works/document/4409

49 https://en.epicenter.works/document/4633

50 https://en.epicenter.works/document/4816