For a fair contribution of large bandwidth users to network financing

Fact sheet n°1 – Methodology for calculating the costs borne by French telecom operators

According to Arcep data, in less than 10 years, traffic entering on the networks of operators Altice-SFR, Bouygues Telecom, Free and Orange has increased from 2 Tbit/s in the first half of 2012 to 35.6 Tbit/s in the second half of 2021, i.e. a downstream traffic multiplied by 18 in less than 10 years. Specifically on mobile, data consumption in 2021 was of 8,664 exabytes, which represents an increase of 21.6% compared to 2020[1]. An Ericsson report[2] also predicts an exponential increase in mobile usage capable of reaching 47 GB/month/user by 2026 on mobile networks in Europe. In comparison, this consumption was 10GB/month/user in France in 2021[3].

These past and future traffic increases require a lot of investment from network operators, while unevenly benefiting the players in the internet ecosystem.

Studies are underway among operators to determine in detail the weight of major providers of content, applications, and services[4] (Amazon, Apple, Google (Alphabet), Facebook (Meta), Microsoft and Netflix). The first estimates are consistent with those presented at global and European level by the Sandvine and Axon reports, namely that 66% of traffic in EMEA is occupied by video services or video game uses, and that in total the weight of these six players combined on incoming traffic is around 55% of total traffic.

The purpose of this factsheet is to characterise the network costs generated by these six actors, to which they do not contribute, thus limiting the investment capacity of electronic communication operators. This situation also severely limits the ability of the latter to freely determine their strategies for the future, which are directly conditioned by the significant expenditure required to adapt the capacity of the networks to the explosion of traffic.

1. *Presentation of the methodology*

In order to calculate the costs borne by French telecom operators, we now use the following methodology, depending on the network concerned:

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[1] ARCEP – *Electronic Communications Market Observatory: Electronic Communications Services in France*, 24 May 2022.

[2] *Ericsson Mobility Postponement*, Juin 2021 p35

[3] ARCEP – *Electronic Communications Market Observatory: Electronic Communications Services in France*, 24 May 2022

[4] In the sense of Regulation 2015/2120 on an open Internet.

a) Calculating the weight of large bandwidth users:

- Identification of incoming flows on networks, put into perspective with ARCEP data presented in the quarterly study on the electronic communications market in France[5] ;
- Restriction to peak hours (8pm – 10pm), which are those conditioning the sizing of the network in terms of capacity;
- Calculation of the representativeness of the targeted actors as a percentage over these peak hours, smoothed over six months to avoid overweighting punctual peaks in activity and to guarantee the representativeness of the model.

b) Calculation of the costs borne by French telecom operators:

- Definition of incremental costs via the distinction, over the year, between costs solely allocated to coverage, and those related to capacity, directly impacted by the increase in traffic[6] ;
- Charging incremental costs to the primary content providers benefiting from capacity increments based on their representativeness within busy-hour traffic.

2. *First results of calculations*

For the four operators, the costs generated by the six users identified on mobile are estimated to be close to 1.5 billion euros per year, and around 500 million euros on fixed networks. We note that these data are consistent with those presented by the Frontier report, published in March 2022, when reported to the national situation.

A more detailed presentation of the incremental cost estimation method according to the network and the calculations presented above can be made if necessary during Q3 2022[7].

French operators therefore estimate that the financial objective of the proposed measure should be equal to the incremental costs generated by these actors, i.e. a target of nearly €1.5 billion on mobile and €500 million on fixed.

[5] It should be noted here that these estimates include a margin of error, due to the multiplicity of entry points for content from these companies on the operators' network (direct interconnection, via a freight forwarder, via a CDN, etc.). Fact sheet n°3 proposes a transparency mechanism in order to better identify flows, and therefore to calculate a remuneration perfectly aligned with the reality of traffic.

[6] A reflection is necessary in order to estimate the share of the costs related to 5G (license, deployment) to be attributed to the capacity costs, 5G being deployed in very dense areas above all to desaturate the 4G networks.

[7] The current model is based on the calculations of two of the four operators, related to the size of the French market on the basis of data made available by Arcep.

Fact sheet n°2 – Compatibility of Regulation 2015/2120 on an open internet with the establishment of a fair contribution to the deployment of telecom networks

The system envisioned by the French Telecoms Federation is based on a principle of obligation to compensate for the additional costs caused by incoming traffic from certain providers of content, services or applications whose activities result in a massive use of bandwidth. This framework is fully compatible with Regulation 2015/2120 on an open internet, and therefore does not require any modification of the text. In doing so, this proposal aims to correct an imbalance of power between operators and major Internet players, in strict compliance with existing law.

1. *The proposed scheme is part of the objectives pursued by the Open Internet Regulation*

The purpose of the Regulation is set out in Article 1: " *This Regulation establishes common rules to safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end-users' rights*.".

In order to achieve these objectives, the Regulation then lays down various principles in its article 3:

- A principle of freedom for end-users (who are both consumers/professionals who access the Internet and/or providers of content, services and applications[8]) " *to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user's or provider's location or the location, origin or destination of the information, content, application or service, via their internet access service*.";
- A principle prohibiting electronic communications operators from limiting the exercise of these rights whether (i) through traffic management measures that do not comply with the Regulation or (ii) through stipulations of agreements concluded with end-users describing the commercial and technical conditions and characteristics of Internet access services.

The envisaged scheme does not intend to infringe the rights of end-users set out in the Open Internet Regulation and, above all, it does not in any way imply additional or discriminatory traffic management measures to the detriment of providers of content, services and applications.

Indeed, in so far as traffic on the network is treated in an equal and non-discriminatory manner, there is nothing to prevent a commercial agreement, within the meaning of Article 3§2 of the Regulation between electronic communications operators and providers of content, services and applications, from compensating for the costs incurred by traffic generated by massive users of bandwidth. Nor is there anything to prevent the determination of companies subject to a network financing contribution thanks to a system of thresholds, thus allowing fair regulation, without impact for other Internet actors in order to guarantee the plurality and diversity of the ecosystem. Nevertheless, several practices effectively limit this capacity.

[8] See on this point: CJEU, 15 September 2020, Telenor Magyarország Zrt. c/ Nemzeti Media- és Hírközlési Hatóság Elnöke, Aff. C-807/18 and C-39/19, paragraphs 36 and 37.

Firstly, there is currently no legal or regulatory measure in national law allowing for a measurement of all incoming traffic from a single player, when the latter is not directly interconnected with the operator– even if European law does not preclude this.

In addition, operators have no bargaining leverage: they obviously cannot cut off or degrade the quality of service according to the open internet regulation, but they also run the risk that the provider concerned will simply decide to degrade the quality of its service for the operator's customers. Thus, an operator who is too insistent on its willingness to negotiate a tariff that truly covers the capacity costs incurred by a major Internet player runs the risk of being caught between the legitimate quality of service requirements of its customers, and the ability of the other party to the negotiation to divert traffic in such a way as to create a strong competitive disadvantage between the operator concerned and other operators for whom the quality of service would be better.

As the targeted players are of major importance in the market, they thus have disproportionate bargaining power vis-à-vis operators, in particular given the high churn rate of the telecoms sector.

In order to counterbalance the power of certain players and the regulatory asymmetry affecting commercial relations between operators and content providers, European law must therefore be clarified in order to allow electronic communications operators to recover the costs incurred by traffic generated by massive bandwidth users, through a contractualisation obligation.

2. *The Open Internet Regulation provides a framework for the envisaged system that must be specified for actors with disproportionate market power in order to be effectively applied*

Recital 7 of the Regulation sets out, from 2015, outlines of a regulation of agreements between operators and end users. In the case of providers of content, applications and services that occupy massive bandwidth, it must be clarified and strengthened, in the strictest respect of the framework provided for by European law.

The planned mechanism is as follows:

- Recital 7 explicitly provides for the possibility of concluding trade agreements, provided that they cannot lead to discrimination in treatment;
- National regulatory authorities have the capacity to monitor such commercial agreements or practices, and may in particular take into account *the 'respective market positions of those providers of internet access services as well as the providers of content, applications and services concerned'* .

The operators propose to clarify this system by introducing an obligation for providers of content, applications and services that are particularly bandwidth-intensive to contract with operators in order to compensate for incoming traffic beyond reasonable use.

In full agreement with the Open Internet Regulation, we propose to clarify that such agreements cannot result in an interruption or modification of the quality of service at the initiative of either party, or in traffic management measures that are not compatible with the BEREC Regulation and guidelines, thus strengthening the principle of net neutrality by applying a principle of reciprocity. The details of the envisionned scheme are presented within the fact-sheet n°3.


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Fact Sheet n°3 – Presentation of the envisaged mechanism

While the French Postal and Electronic Communications Code gives Arcep the power to settle disputes over the reciprocal technical and tariff conditions for the routing of traffic, including management, between an operator and a company providing online communication services to the public, this system has never shown its effectiveness.

This is why we would now like to see the establishment of a European scheme to identifythe real costs incurred by a few dominant content providers within the networks of each operator, on the basis of the methodology identified in sheet n°1, and to define a contractual framework fully compatible with the requirements of the regulation on an open internet as set out in sheet n°2. First, it is based on the creation of an obligation of transparency, in order to identify the companies subject to it, and to measure in detail the share of their incoming traffic within each network (1), then, on the definition at European level of a method for calculating recoverable costs allowing fair financial compensation (2), and finally, on the creation of a contractualisation obligation (3).

1. *Creation of an obligation of transparency to identify the obliged companies*

At present, it is impossible for the operator to accurately allocate the volume of incoming traffic to each provider of content, applications or services, due to the multiplicity of entry points on our networks (direct interconnection, via a freight forwarder, via a CDN, etc.). Thus, if we are currently able to heuristically estimate an approximate share of traffic, we consider it preferable to create an obligation of transparency for providers of content, applications or services with the national regulatory authorities, which is then centralised at European level with BEREC.

On this basis, it would be possible to accurately calculate the share of incoming traffic at European level of each provider of content, services and applications and thus determine among them the main beneficiaries of the European digital economy.

In order to target these players, we propose to use the existing relationship between operators' investments and the use of bandwidth at the busy hour, the main data allowing the sizing of a network and capable of guiding decisions in capacity investment.

Thus, the obligation of transparency will be able to cover at least the traffic sent on the network of each operator according to a daily granularity at peak hours (20h-22h), distinguishing between the fixed or mobile destination network.

The processing applied to this data will make it possible to calculate the European representativeness of each content, service and application provider within the busy hour (20h-22h), according to an average over a period of 12 months - in order to avoid taking into account one-off events such as sporting or political events.

Finally, the definition of a minimum threshold would make it possible to determine whether a provider of content, services and applications is defined as the main beneficiary of the capacity investments made by European operators and would be subject to a contribution. In order to give predictability to

the parties, a fixed threshold according to the type of network would be determined at the level of the European Union[9].

Crossing that threshold would automatically trigger an obligation for the content provider on the one hand to make their content/services available to internet service providers without discrimination in quality, and on the other hand to enter into a contract with the operator. For their part, electronic communications operators will have to maintain distribution in a non-discriminatory manner.

It should be noted that content providers below this threshold as well as content delivery networks would thus be outside the scope of application of the contribution, which targets only the largest content providers responsible for the majority of traffic. Thus, the proposed measure would also have an incentive effect of sobriety in flows, thus making it possible to stabilize the environmental footprint of digital technology.

2. *Ex-ante cost-setting mechanism*

In order to define precisely the incremental costs caused by traffic overload, we believe that a common calculation method should be established at European level, distinguishing between fixed and mobile networks, supervised at national level in order to take into account possible differences in network-related costs, for example due to objective indicators such as the costs inherent in the topographical complexity of the Member States, the cost of inputs (raw materials, energy, labour costs), technical progress, etc.

This method should include the following steps, depending on the fixed or mobile network, in order to ensure a real objectivity of the compensation mechanism:

- Identification by each operator of its annual costs related to deployment, taking into account only capacity costs as opposed to cover costs.
- Charging costs to incoming traffic of content, service and application providers, based on reported data.

The incremental costs thus calculated should be offset by the providers of content, services and applications targeted in point 1 and defined as the main beneficiaries of these investments, in proportion to their representativeness within the operator's traffic via an obligation to enter into an agreement.

[9] Work is underway within the FFTélécoms to estimate which threshold would be appropriate for the French market. However, due to the difficulty previously described in obtaining accurate data due to the lack of transparency of the providers of content, services and applications, and taking into account the potential gaps within the European Union between Member States, we believe that a discussion at European level is necessary.

3. *Framework for the obligation to enter into contractual negociations between operators and obliged entities*

The method of calculating the fair value to be offset defined in point 2 above would allow the fixing of a gigabyte tariff at European level, which the national authorities would have the possibility of adapting in order to take account the differences in investments and the particularities of each Member State. On that common and previously known basis, the parties would be obliged to conclude a private law contract including compensation for the costs invested in the networks concerned. Such an agreement cannot result in discriminatory treatment or routing of flows aimed at changing the quality of service for the end-users of any operator, allowing customers to benefit from a constant quality of service and to avoid competitive biases on the telecoms market. Thus, content providers should be unable to prohibit or degrade access to their offer to the detriment of customers of a particular operator in response to the envisaged mechanism.

In the philosophy of recital 7 of the Regulation, the national regulatory authority would be responsible for supervising the scheme, in particular to prevent discriminatory or anti-competitive behaviour. A sanction procedure will also have to be put in place in case of non-compliance with the contract by the content provider.

In conclusion, we believe that this solution would be virtuous for the development of networks, both in terms of territorial deployment and capacity, while creating a strong incentive to control flows, in order to achieve a common objective of digital sobriety. The recovery of investment costs from those who benefit most from it is fair from the point of view of users, who should today bear alone future deployments of 5G and other capability investments on the core network part directly dictated by a small number of powerful players in the digital economy for the benefit of a subset of users.

The proposed mechanism is also in line with net neutrality, and the determination of the obliged companies through a system of thresholds allows for fair regulation, without impact for other internet actors in order to guarantee the plurality and diversity of the ecosystem. Finally, it is a strong partnership between different actors in the ecosystem, for the benefit of society as a whole.