

Finnish Communications Regulatory Authority's opinion regarding the allocation of frequency resources among mobile broadband subscriptions within the framework of the net neutrality regulations

The Finnish Communications Regulatory Authority (FICORA) has been asked for an opinion on the possibility to allocate frequency resources unevenly among subscriptions with varying maximum speeds. In practice, this concerns situations in which different QCI quality classes are defined for different speed categories. In that case, the speed categories have different weighting coefficients in the radio resource allocation that takes place in the base station. In this statement, FICORA presents the criteria based on which it assesses the procedure's compliance with the EU Net Neutrality Regulation¹.

1 Technical framework conditions

A telecommunications operator may not offer prioritised internet subscriptions, such as prioritised mobile broadband subscriptions previously provided to corporate customers, without a justification specified in the Regulation.

However, the telecommunications operator may limit a subscription's maximum speed in accordance with the agreed speed category, and it may allocate the radio resources of mobile communications networks. Thus, it is possible for subscriptions of different speed categories to receive a different number of radio resources from the network.

This means that the telecommunications operator may place subscriptions of different speed categories into different QCI quality classes in which case the speed categories' differences become visible also in the event of normal congestions. The telecommunications operator may place all subscriptions in the QCI class 9. In that case, all subscriptions are treated equally. The telecommunications operator may also use other non-GBR classes (QCI 6–9) for mobile broadband subscriptions. In that case, the weighting coefficients defined for different speed categories in connection with the allocation of frequency resources may not differ from each other more than the speed categories differ from each other.

For example, if the weighting coefficient of a 50 Mbit/s subscription is x , the weighting coefficient of a 100 Mbit/s subscription may not be more than $2x$, and the weighting coefficient of a 300 Mbit/s subscription may not be more than $6x$. The difference between weighting coefficients may also be smaller than the ratio between the speeds of the subscriptions. For example, all subscriptions with a maximum speed of ≤ 50 Mbit/s or ≤ 100 Mbit/s may be

¹ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015, laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

placed in the same quality class, and they may have the same weighting coefficient. This enables ensuring that subscriptions of lower maximum speeds function in the event of congestion.

The different treatment of dissimilar speed categories is allowed only with respect to defining the weighting coefficients for radio resource allocation, and subscriptions may not be prioritised in relation to each other elsewhere in the network, for example, in the backbone network.

All subscriptions within the same speed category shall be treated equally. Thus, the model described in this statement cannot be used for the provision of better service quality for corporate subscriptions, for example. This equal treatment requirement also entails that the network company shall treat different telecommunications operators' subscriptions of the same speed category equally.

2 Stating the procedure

Under Regulation (EU) 2015/2120 and the Act on Electronic Communications Services (917/2014), the contractual terms shall include a comprehensible and clear description on

- how the traffic management measures applied by the telecommunications operator could impact the quality of the internet access services;
- how the speed of the subscription may affect the internet access services in practice and, in particular, the use of content, applications and services; and
- what are the estimated maximum speed and the advertised speed of the internet access service.

As stated in FICORA's opinion on the speed of internet access services², in order for the provided information to be considered comprehensible and clear, the user must be able to understand:

- what the specified speed means; for example, what is the relation between the indicated maximum speed or the advertised speed and the realised speed; and
- what the internet access service speed must be in order for it to comply with the contract.

As the measures taken may have a significant impact on the realised speed in the event of congestion, the contractual terms shall state in a clear and comprehensible manner, how the radio interface traffic management based on the relation of speeds affects the realised speed in practice.

The contractual terms shall, in a manner comprehensible to the user, state in which situations the maximum speed can be achieved, and how congestions affect the speeds of different speed categories. The description must comprehensibly explain that if the base station becomes loaded or congested, the speeds of subscriptions of different speed categories are determined on the basis of the relation of their maximum speeds. The description

² [Finnish Communications Regulatory Authority's opinion regarding the reasonable method of indicating the speed of internet access service](#) 13 September 2016, Reg. no: 605/923/2016.

shall provide concrete information, and therefore, it is, in principal, relevant to explain the ratios between the actual weighting coefficients and provide examples on the matter (for example, it shall be explained that in the event of congestion, a subscription with a maximum speed of 300 Mbit/s is provided with a speed six times higher than a 50 Mbit/s subscription).

Since the different treatment of dissimilar speed categories essentially affects the speed typically experienced by the user, FICORA recommends describing the effects by indicating the subscription's normally available speed. In that case, it may not be necessary to describe the effects of congestion control weighting coefficients separately in the manner presented above. Due to the domestic legislation previously in force, a minimum is typically specified for the speed range of mobile network subscriptions. It may be useful to indicate the minimum in the description although it is not obligatory.

BEREC's guidelines state that the contract shall state the maximum speed realistically available to the user. The maximum speed must be achievable in realistic conditions of use. This statement does not take a stand on the appropriateness of specifying the maximum speed when using the procedure described in the statement.

FICORA does not monitor marketing, but we would like to point out that the use of quality classes must be taken into account in connection with the marketing of internet access services that operate in the mobile communications network. This concerns both the information provided on the services and the marketing of subscription speeds in general. For example, if data based on average speed measurements is used for the purposes of marketing, it should be taken into account that measurements performed on subscriptions of the highest quality class may not provide a realistic image of the available speeds of all speed categories.

3 Boundary conditions of traffic prioritisation and the requirements of contractual terms

3.1 Allocation of radio interface resources from the perspective of net neutrality

The EU Net Neutrality Regulation regulates the traffic management measures used by internet access service providers, the provision of specialised services and the content of contractual terms. By virtue of the Regulation, BEREC has prepared guidelines which FICORA must take into account when interpreting and applying the Regulation.³

Under Article 3(3)(1) of the Regulation, providers of internet access services shall treat all traffic equally without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used. Under subparagraph 2, this shall not prevent providers of internet access services from implementing reasonable traffic management measures. In order to be deemed reasonable, such measures shall be transparent, non-discriminatory and proportionate, and shall not be based on

³ BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules (BoR (16) 94). The guidelines are available on [BEREC's website](#).

commercial considerations but on objectively different technical quality of service requirements of specific categories of traffic.

As stated in the BEREC Guidelines (paragraph 53) the equal treatment of traffic does not imply that all users will experience the same quality of service. Article 3(2) of the Regulation verifies that internet access service providers and end-users may agree on the commercial and technical conditions and characteristics of the internet access services such as speed, but the contracts shall not limit the exercise of the rights of end-users laid down in Article 3(1).⁴

Thus, in accordance with the Regulation, the speed of the internet access service may be agreed upon, but the traffic management measures must be transparent, non-discriminatory and proportionate. In FICORA's opinion, the telecommunications operator may limit a subscription's maximum speed in accordance with the agreed speed category, and it may allocate mobile communications network radio resources. Thus, subject to certain boundary conditions, it is possible for subscriptions of different speed categories to receive a different number of radio resources from the network.

In order for measures related to radio resource allocation to be *transparent*, the contractual terms shall describe them in the manner explained above. In order for the measures to be *proportionate*, they shall have an acceptable objective, they shall be appropriate with respect to achieving the objective, and practices not sufficient for achieving the objective may not be applied. The objective of the measures shall be to provide subscriptions of different speed categories with a number of radio resources sufficient for maintaining the realised speed on the level required by the agreed ratio. However, the frequency resource allocation ratio may not exceed the ratio between different speed categories.

In order for the measures to be *non-discriminatory*, they must treat similar incidents in an equal manner. Thus, subscriptions of the same speed category must be treated in an equal manner. This also concerns the subscriptions of telecommunications operators in relation to the subscriptions provided by the network operator as a telecommunications operator.

The radio interface resource allocation referred to in this opinion does not refer to the measures going beyond reasonable traffic control referred to in Article 3(3)(3) of the Regulation. Furthermore, it does not refer to the optimised services referred to in Article 3(5) as this statement concerns internet access services.

3.2 Requirements of contractual terms

Under Article 4(1) of the Net Neutrality Regulation on contractual terms, internet access service providers shall ensure that any contract which includes internet access services specifies at least the following:

⁴ Under Article 3(1) of the Regulation, end-users 'shall have the right 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) information on how traffic management measures applied by that provider could impact on the quality of the internet access services, on the privacy of end-users and on the protection of their personal data;

b) a clear and comprehensible explanation as to how any volume limitation, speed and other quality of service parameters may in practice have an impact on internet access services, and in particular on the use of content, applications and services;

d) a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, or of the estimated maximum and advertised download and upload speed of the internet access services in the case of mobile networks, and how significant deviations from the respective advertised download and upload speeds could impact the exercise of the end-users' rights laid down in Article 3(1); --.

Under the the Act on Electronic Communications Services, Section 107(1), a telecommunications operator has an obligation to draw up standard agreement terms for consumer agreements on communications services and to use them when entering into agreements with consumers. The agreements shall not include any terms or limitations unfair to the consumer. The terms of the agreement shall be worded in clear and understandable language.