Verbraucherzentrale
Bundesverband

Protecting the Open Internet in the Age of Network Slicing

Comments from the Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband - vzbv) on BEREC's Public consultation on the draft Further Guidance on 5G Network Slicing (BoR (26) 84)

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Content

I. Relevance for consumers

Net neutrality protects consumers by ensuring that Internet Service Providers (ISPs) cannot slow down, block, or otherwise restrict access to online content, nor can they charge additional fees for specific services or prioritise their own offerings over those of competitors. This principle guarantees a fair and open internet for all users. It also fosters competition and innovation by allowing businesses to compete on a level playing field. Without net neutrality, large companies could pay ISPs for preferential treatment, gaining a significant advantage over smaller competitors, which would ultimately reduce consumer choice and increase prices.

Network slicing challenges this principle. It enables a single physical network to be divided into multiple virtual networks, or “slices”, each offering different performance levels. This allows ISPs to differentiate between types of traffic, applications, or customers within the same network. It opens the door for private companies to influence how data traffic is handled, potentially giving preferential treatment to certain services. As a result, network slicing can create new forms of discrimination in data transmission, undermining the core values of net neutrality.

It is important for consumers that specialised services serving the public interest can be provided reliably and without delay, for example to ensure the best possible response in emergency situations. At the same time, consumers are increasingly being offered services where the prioritisation of certain data traffic appears to be driven primarily by commercial considerations. Consumers are often unaware both of this prioritisation and of any resulting discrimination against competing services. Given that investigations into potential breaches of net neutrality can be complex and time-consuming, identifying impermissible practices is important in establishing clear boundaries for all market participants.

II. Introduction

Regulation (EU) 2015/2120 (Open Internet Regulation, OIR) has governed net neutrality since 2015, ensuring equal treatment of data transmitted via the internet and non-discriminatory access when using data networks. The Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband - vzbv) strongly welcomes the Body of European Regulators for Electronic Communications' (BEREC's) past and future efforts to safeguard net neutrality in Europe. With its Guidelines on the Implementation of the Open Internet Regulation, BEREC provides legal certainty regarding the interpretation of the OIR and a balanced approach that enables the development of innovative services while safeguarding the open internet.

However, some stakeholders – especially large telecommunications companies – are claiming a lack of certainty concerning the compatibility of innovative services, particularly those based on 5G network slicing, with the OIR. BEREC has therefore published draft further Guidance on 5G network slicing.[1] vzbv thanks BEREC for the opportunity to provide comments from a consumer perspective. vzbv's comments build on its earlier submission to BEREC's initial call for input.[2]

[1] BEREC, Further Guidance on 5G network slicing, 2026, BoR (26) 84, https://www.berec.europa.eu/system/files/2026-06/BoR%20%2826%29%2084_Further%20Guidance%20on%205G%20Network%20Slicing.pdf.

[2] Verbraucherzentrale Bundesverband (vzbv), No compromise on net neutrality, 2026, https://www.vzbv.de/sites/default/files/2026-02/26-02-06_vzbv_BEREC%20call%20for%20input_network%20slicing.pdf.

III. General Remarks

According to Article 3(3) of the OIR, telecommunications providers are required to treat all data traffic equally. However, specialised services are services that require a specific level of quality which cannot be assured over the open internet. Under Article 3(5) of the OIR, such services may be provided under certain conditions and are not subject to the equal-treatment and non-discrimination obligations that apply to Internet Access Services (IAS). This exemption allows ISPs to give preference to certain services. It is therefore necessary to limit the scope of this exemption to what is strictly necessary.

The OIR, together with the BEREC Guidelines, has established a balanced approach that allows such services only where they technically require optimisation that cannot be delivered via IAS, and provided that the provision of specialised services does not impair the quality or availability of the open internet. This ensures that ISPs cannot circumvent net neutrality rules by using the specialised services exemption to offer preferential treatment to services that could function on the regular internet. Over the past years, the Guidelines have been updated to ensure that they keep pace with technological developments.

> With the draft ‘Further Guidance on 5G network slicing’ now published, BEREC is further clarifying the requirements set out in the Guidelines and categorising specific use cases, particularly with regard to the new technical developments identified by companies. In doing so, BEREC is providing the required legal certainty for companies and making it clear that most of the desired innovations are already permitted under the current net neutrality regulations. The few use cases that remain prohibited are rightly considered incompatible with fundamental net neutrality principles, as they would introduce unjustified discrimination in internet traffic and should therefore remain prohibited. Any further opening up of the regulations should be avoided in the interests of a fair and non-discriminatory internet.

IV. Comments on the draft

vzbv welcomes the objective of further clarifying the net neutrality requirements set out in the Open Internet Regulation[3] (OIR) and the accompanying BEREC Guidelines[4]. It is important that the Guidance provides legal certainty within the framework of the Guidelines but does not go beyond the Guidelines. This framework strikes an appropriate balance between safeguarding the open internet and allowing scope for innovation. However, vzbv is concerned that, in several areas, the draft Guidance departs significantly from the requirements set out in the Guidelines, thereby weakening the standards they establish. This should be revised to ensure that the Guidance fulfils its intended objective.

1. Ensuring a diverse supplier base for innovative technologies

Effective competition is a prerequisite for a high level of consumer protection. It enables consumers to choose between different providers and benefits them through competitive prices, high-quality services and attractive contractual terms.

The German mobile communications market currently comprises four mobile network operators (MNOs), one of which is still in the process of rolling out its network. In this context, Mobile Virtual Network Operators (MVNOs), which lease network capacity from MNOs, play a particularly important role in fostering effective competition.

> To ensure that MVNOs are not placed at a competitive disadvantage with regard to technological innovation, the Guidance should explicitly state that they must be able to offer the same network slicing services as the host MNOs. Any contractual provisions that prevent, restrict or otherwise discriminate against MVNOs in this regard should be prohibited.

2. The necessity criterion (Section 3.3.1)

Article 3(5) OIR permits specialised services only where **optimisation is objectively necessary** to meet the requirements of a specific content, application or service. As Recital 16 of the OIR and the BEREC Guidelines[5] make clear, this requirement is a key safeguard preventing the specialised services exception from undermining the protections afforded by Article 3(3) of the OIR.

vzbv is concerned that the draft Guidance weakens this criterion. Section 3.3.1 cites low latency for real-time applications, such as virtual reality (VR)/augmented reality (AR), as a typical inherent requirement and refers to applications that "*might already be deployed over IAS, but with worse quality*". This example is problematic because it suggests that an application may qualify as a specialised service even where it already functions over internet access services. However, the fact that an application performs better with assured quality does not demonstrate that optimisation is objectively necessary. If this were sufficient, virtually any application could be provided as a specialised service.

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[3] Regulation (EU) 2015/2120, http://data.europa.eu/eli/reg/2015/2120/oj.

[4] BEREC, BEREC Guidelines on the implementation of the Open Internet Regulation, BoR (22) 81, paragraph 1.

[5] Paragraph 101, 105, 108, 110, 111 of the BEREC Guidelines.

The example is also difficult to reconcile with Recital 16 of the OIR, which requires optimisation to be objectively necessary rather than merely granting priority over comparable services available via internet access.

vzbv therefore asks BEREC to remove the phrase *"where certain applications might already be deployed over IAS, but with worse quality"* and to clarify that improved performance compared with delivery over IAS does not, in itself, establish objective necessity.

More generally, the Guidance should explicitly restate the requirement from the Guidelines that optimisation must be objectively necessary and cannot be justified solely because a higher or contractually guaranteed quality level is desired. Optimisation is not objectively necessary where an application can function over a well-provisioned internet access service.

vzbv also welcomes the requirement that operators demonstrate not only that standard internet access is insufficient, but also that quality-differentiated IAS offers compliant with Article 3(2), including slice-based offers, cannot meet the relevant requirements.

> Where an application's needs can be met through an application-agnostic low-latency IAS offer,provision as a specialised service is not objectively necessary. This should be stated expressly in the Guidance.

3. The capacity and quality requirements (Section 3.3.3 and 3.3.4.)

Article 3(5) OIR permits specialised services only where sufficient network capacity exists in addition to any IAS provided and where such services do not impair the availability or general quality of IAS.

3.1 The role of competition

Sections 3.3.3 and 3.3.4 suggest that competition provides incentives for operators to maintain sufficient capacity and avoid negative impacts on IAS quality. While competition may encourage investment, compliance with Article 3(5) must be assessed against objective capacity and quality criteria. The existence of competitive pressure cannot substitute for demonstrating compliance with the Regulation.

Moreover, the existence of the OIR follows from the recognition that competition alone is insufficient to safeguard end-users' ability to access and use the content, applications and services of their choice.

> vzbv therefore calls on BEREC to remove references suggesting that competition can ensure compliance with Article 3(5) of the OIR.

3.2 Contractual compliance is not evidence of no degradation

Section 3.3.4 states that, where providers comply with their contractual obligations and no degradation has been observed, the risk of IAS degradation may be considered negligible. This approach is inconsistent with Article 3(5) of the OIR, which establishes an objective standard based on the actual availability and quality of IAS.

As Recital 17 of the OIR makes clear, compliance should be assessed using objective indicators such as latency, jitter, packet loss, congestion levels and user experience. Contractual obligations,

particularly in mobile networks where no minimum quality levels are typically specified, cannot serve as evidence that degradation has not occurred.

> vzbv therefore asks BEREC to clarify that compliance with Article 3(5) of the OIR must be assessed on the basis of measured service quality experienced by end-users.

3.3 Dynamic resource allocation

vzbv supports the use of dynamic resource allocation where it is consistent with the Regulation. However, more efficient use of resources does not create additional capacity and does not relax the requirements of Article 3(5) of the OIR. Where capacity is constrained, resources allocated to specialised services may reduce the resources available for IAS.

> BEREC should therefore clarify that dynamic allocation may only use capacity not required by IAS at a given moment and that such capacity must be returned automatically and immediately when IAS demand increases.

3.4 Monitoring and evidence of compliance

The draft Guidance relies repeatedly on the absence of observed degradation as evidence that specialised services are not harming IAS. However, monitoring appears to remain optional. Where operators are not required to monitor service quality, the absence of observed degradation cannot be treated as evidence of compliance.

> vzbv therefore calls on BEREC to clarify that the absence of observed degradation is relevant only where adequate monitoring mechanisms are in place, and that operators' self-assessments do not create a presumption of compliance.

3.5 Event-based degradation

Section 3.3.4 suggests that degradation caused by 5G slicing during specific events, such as concerts, may be acceptable if limited to the duration of the event and confined to a small number of cells. vzbv does not consider this consistent with Article 3(5) and Recital 17 of the OIR.

Recital 17 of the OIR permits only impacts that are unavoidable, minimal and short-lived. Event-related congestion at planned and recurring venues is generally foreseeable and can be addressed through capacity planning or additional infrastructure. Furthermore, the assessment should focus on the quality experienced by end-users in the affected cells rather than on the average impact across the wider network.

> vzbv therefore calls on BEREC to remove these passages and clarify that any degradation must be assessed from the perspective of the end-users affected, irrespective of whether the impact is geographically limited or linked to a specific event.

4. The suggested examples

4.1 Example 1 - Additional application-agnostic examples would be beneficial

vzbv agrees with BEREC’s assessment in relation to Example 1. While it is understandable that the Guidance can only highlight a limited number of illustrative examples and does not seek to provide an exhaustive list, the inclusion of additional application-agnostic examples would further enhance legal certainty and facilitate consistent interpretation.

4.2 Example 2a – VR/AR applications do not qualify as specialised services

As explained above, vzbv considers that, VR/AR applications do not qualify as specialised services, as they operate via IAS, meaning that optimisation is not 'objectively necessary'. Instead, such a network slice should be offered in an application-agnostic manner, and the end user should have the power to decide which application is optimised.

4.3 Example 2b – immersive applications

As previously noted, vzbv would like to emphasise once again that immersive applications have already been offered via IAS for many years. It is therefore questionable whether these applications really cannot be offered 'efficiently' via the normal IAS.

In accordance with paragraphs 34 to 35 of the BEREC Guidelines, it must also be ensured that the requirements for application-agnostic applications are met and that end-users' rights to control data traffic are not restricted.

4.4 No comments on examples 2c, 3, 4a, 4b and 5

vzbv supports BEREC's assessment of Examples 2c to 5.

4.5 More consumer-related examples would be welcome

Many of the examples listed relate to services aimed at businesses. From a consumer perspective, it would be beneficial if some of the products already available on the market, some of which are at least partly aimed at consumers, were also included.

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